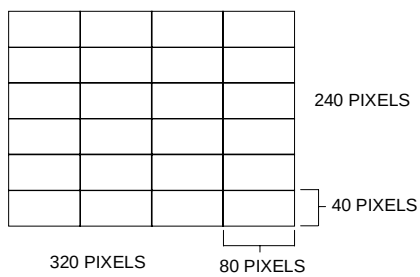
Introduction

Panel Editor

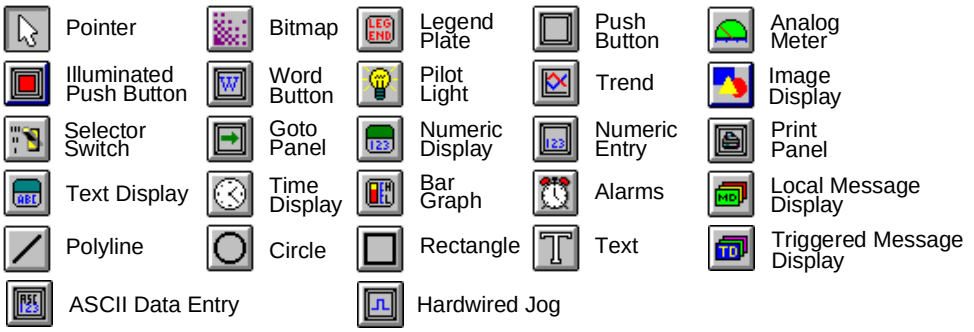
Basic Panel Objects

A basic panel object is a push button, pilot light, illuminated push button, selector switch, or any type of operator control mechanism typically found on a control panel. The *QUICKDESIGNER* editor allows the Windows™ operating system user to easily create basic panel objects and group them in panels. When the design project is completed in Windows™, a project file is transferred to a target display. Using the editor and display combination, you can quickly create and modify a custom control panel for your control application.

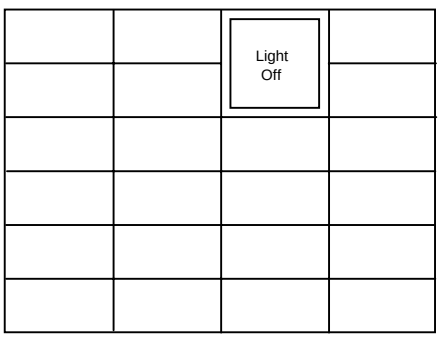
The *QUICKPANEL 5" and 6"* displays are 320 x 240 pixels, which is divided into 24 cells of 80 x 40 pixels. The *QUICKPANEL* 9" EL display is 640 x 400 pixels, which is divided into 80 cells of 80 x 40 pixels. The *QUICKPANEL* 10.5" display is 640 x 480 pixels, which is divided into 96 cells of 80 x 40 pixels. The *QUICKPANEL* 12.1" display is 800 x 600 pixels, which is divided into 150 cells of 80 x 40 pixels. The *QUICKPANEL jr.* display is shown below. The size of the cells and the tiling grid can be changed. The grid is an aid for placing objects on the panel.



The editor presents you with a group of panel object design tools. You simply select one of the tools from the tool box and place it on the screen. Some objects require a PLC word or bit to make them active. These objects are called Dynamic Objects. Some objects are for internal use, such as the GOTO panel, text, legends, bitmaps, etc. These objects are called Static Objects. The pointer is a special tool, used to select objects already on the screen.



In the beginner mode, the editor draws the object in a two cell field. The objects can be resized to suit the panel design. In the following drawing, a Pilot Light object has been placed on the panel.



Once the object appears on the screen, an edit dialog box appears. In the case of the Pilot Light, you can change the text size and color, change background and outline color, and assign a discrete bit in PLC memory to control the light.

Each type of object can be customized to fit a wide range of applications. It therefore becomes very easy to place an object on the screen, modify it for your application and load the project into a target display.

Installation

Installing QuickDesigner

Basic Requirements

1. Windows 95/98 or Windows NT 4.0 Operating System

2. Pentium 133 MHz processor, 32Meg of RAM, 16X CD-ROM drive, 80 Meg of free space on the hard drive, Mouse and Keyboard.

3. 800 x 600 Video Display, 16-bit Color.

Backing up and Restoring your data

NOTE If you are upgrading your QUICKDESIGNER software, your data files will not be changed.

We recommend that you backup your data files often. If someone were to steal your computer or if your hard drive breaks down, you will have a 'backup copy' of your important data files. You can use the project export feature to copy complete project data to a floppy disk.

You may also backup your data by copying the files in your data directory to a safe place. A simple backup procedure from DOS would be to copy all the files from the data directory to a blank and formatted floppy disk. For example: "copy C:\QUICK\DATA*.* b:\ /v" should suffice.

To restore the data, simply copy the data files from the floppy disk back to your data directory. For example: "copy B:*.* C:\QUICK\DATA /v".

You can also use Windows Explorer to copy files to a different data directory or a floppy disk.

Installation Procedures

Insert CD into CD-ROM drive. If AutoRun is enabled, the CD browser will automatically start.

If AutoRun is disabled, select your CD-ROM in Windows Explorer, then double-click InstallFrontEnd.exe.

The CD browser will start and display the following options:

- Install
- Browse Manuals
  - Panel Editor Manual (Manuals are in PDF format)
  - Communications Manual (Manuals are in PDF format)
  - Hardware Reference Manual (Manuals are in PDF format)
- Web Support Site
- Exit

From the main menu, click Install. After a moment, the Installer starts.

Read each screen carefully and follow its instructions.

We recommend you install QuickDesigner in its default directory. If you change from the default, ensure all directories in the new path conform to MS-DOS conventions.

NOTE Do not use spaces or other disallowed characters.

The Installer asks you to choose among these installation types:

Typical installs the software and its most popular extras.

Compact installs the minimum software with no extras.

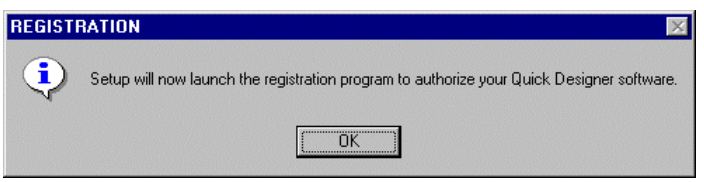
Custom allows you to choose components to install. The Installer shows the *Space Required* for the options you want above the *Space Available* on your hard drive, so you can make sure you have enough room.

The options available are PCO drivers, Acrobat Reader, User Manuals in PDF format, and Knowledge Base files.

Use the PCO option to select only the PCO drivers needed for you application. If you wish to add PCO drivers after installing in the Custom mode, start the installation procedure again, check the Program Files option, then select the driver from the PCO list. Checked drivers will be installed. The Program Files option cannot remove already installed PCO files.

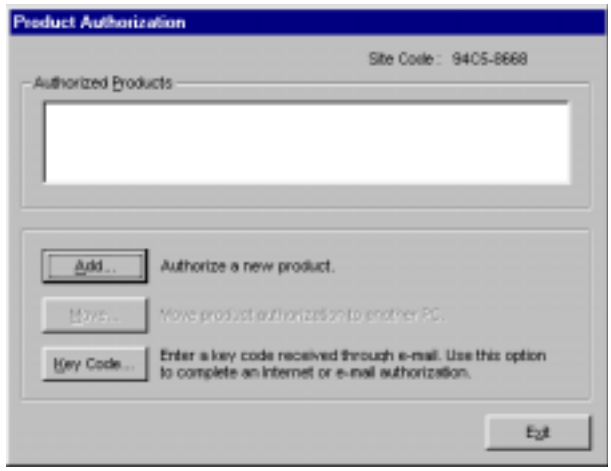
Software Authorization

When the setup program has finished adding QuickDesigner to your system, it will display the following prompt.



Click OK to start the Product Authorization program. You can also start this program from Quick Manager by selecting Help/Product Authorization, or from the Start/Programs/Total Control Products/Product Authorization menu selection.

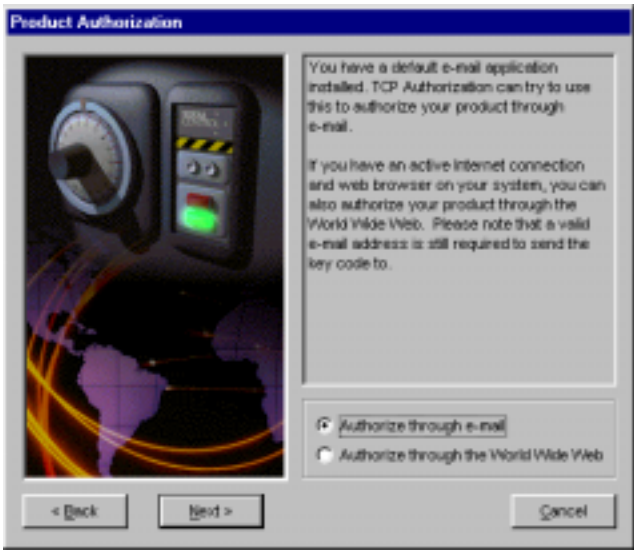
The Product Authorization dialog appears as follows. The Key Code button is used for completing the authorization process when the key code is received through e-mail.


Product Authorization
Site Code : 9405-8668
Authorized Products
Add...
Authorize a new product.
Move...
Move product authorization to another PC.
Key Code...
Enter a key code received through e-mail. Use this option to complete an Internet or e-mail authorization.
Exit

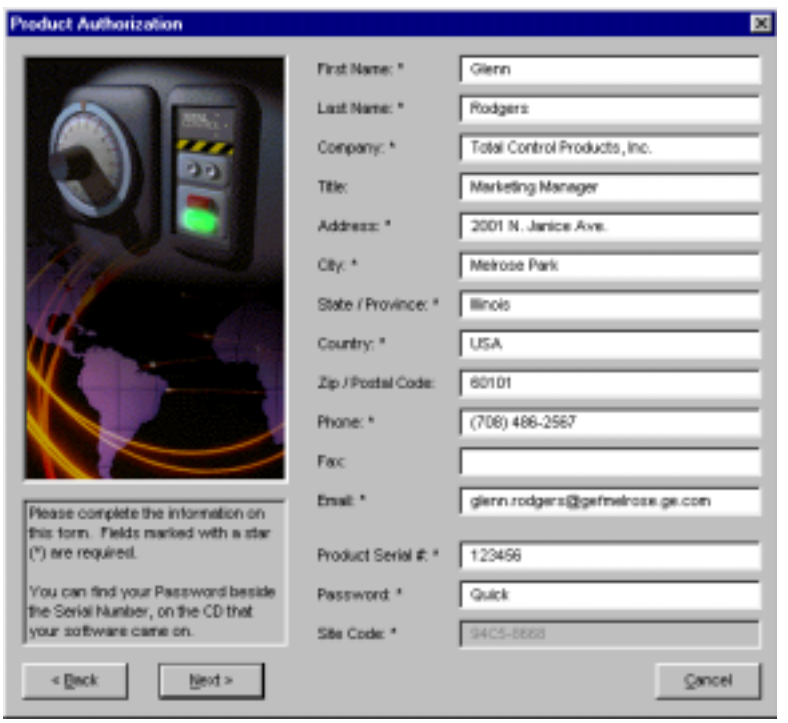
Click the "Add" button to authorize a new product. You will be given several choices for the authorization process.

Product Authorization using Email

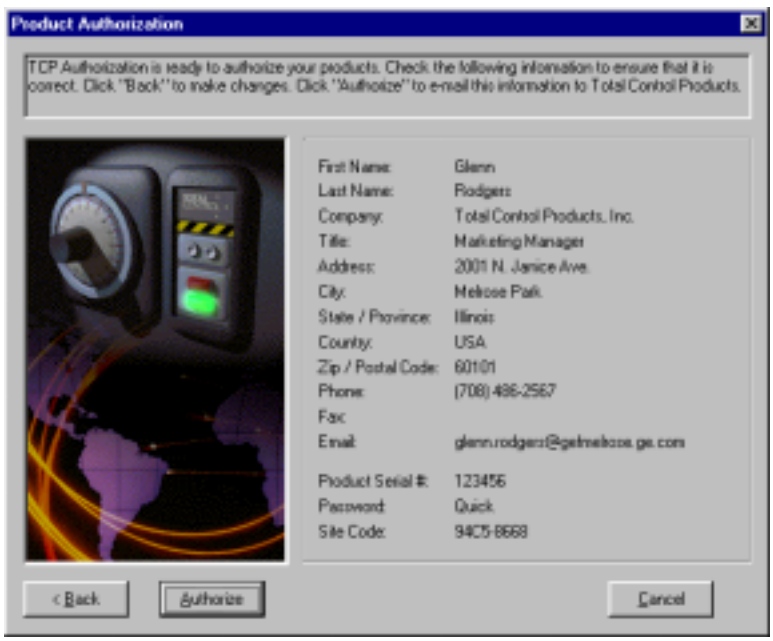
To authorize the software via Email, select the Internet/E-mail option and click Next. The program checks your system for Email functionality and displays the following dialog.


Product Authorization
You have a default e-mail application installed. TCP Authorization can try to use this to authorize your product through e-mail.
If you have an active Internet connection and web browser on your system, you can also authorize your product through the World Wide Web. Please note that a valid e-mail address is still required to send the key code to.
Authorize through e-mail
Authorize through the World Wide Web
< Back
Next >
Cancel

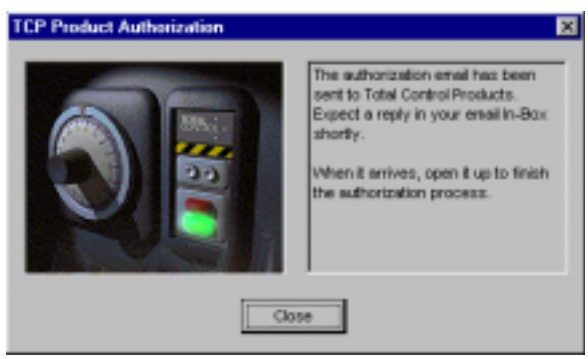
If the Email option is chosen, the following data entry screen appears. You must enter all items marked with an asterisk.



Click the Next button to continue. The next dialog is a summary of the items entered above. Press the Back button to correct any information. Press the Authorize button to send the Email to Total Control Products.


Product Authorization
TCP Authorization is ready to authorize your products. Check the following information to ensure that it is correct. Click "Back" to make changes. Click "Authorize" to e-mail this information to Total Control Products.
First Name: Glenn
Last Name: Rodgers
Company: Total Control Products, Inc.
Title: Marketing Manager
Address: 2001 N. Janice Ave.
City: Melrose Park
State / Province: Illinois
Country: USA
Zip / Postal Code: 60101
Phone: (708) 486-2567
Fax:
Email: glenn.rodgers@getmelrose.ge.com
Product Serial #: 123456
Password: Quick
Site Code: 9405-8668
< Back
Authorize
Cancel

A confirmation dialog will appear. This lets you know that the Email is in the process of being sent or has already been sent, and you should open the Email reply to complete the authorization process.


TCP Product Authorization
The authorization email has been sent to Total Control Products. Expect a reply in your email In-Box shortly.
When it arrives, open it up to finish the authorization process.
Close

Note that the "Close" button is disabled until the email is sent.

Product Authorization via Web Site

To authorize the software via Web Site, select the Internet option and click Next.

TCP Product Authorization
TCP Authorization has detected Email capabilities on this computer. If Email is configured correctly, you may authorize your product via Email.
If not, then choose to authorize via the web at www.total-control.com. You may also choose to authorize via the web even if Email is configured properly.
If this computer is not connected to the internet, press "Back" to select a different authorize method.
Use email on this PC
Authorize through a web site
< Back
Next >
Cancel

Change the option to Authorize through a web site, then click Next.

Dialog
Press 'Finish' to close this wizard and open your default web browser to the TCP Authorization web page.
Your computer must have internet access and be configured properly for this to work.
< Back
Finish >
Cancel

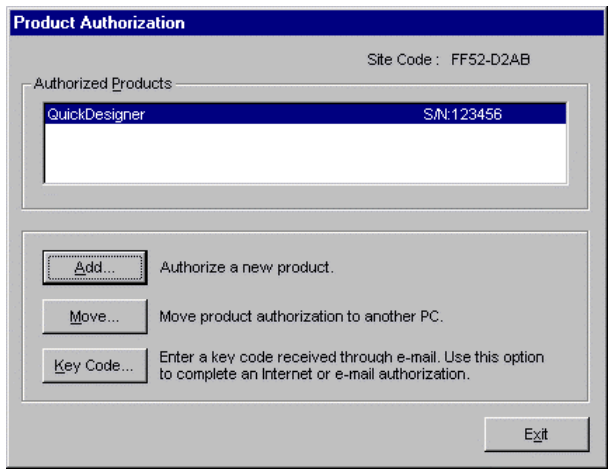
To authorize through a Web Site, click the Finish button. You must have Internet access and be configured properly for this option to work.

The default web browser will then open, to the TCP Authorization web site. The web page will contain a data entry page (see the sample in the Product Authorization using Email section. After the form is submitted, you will be told that your key code will be sent to you through Email.

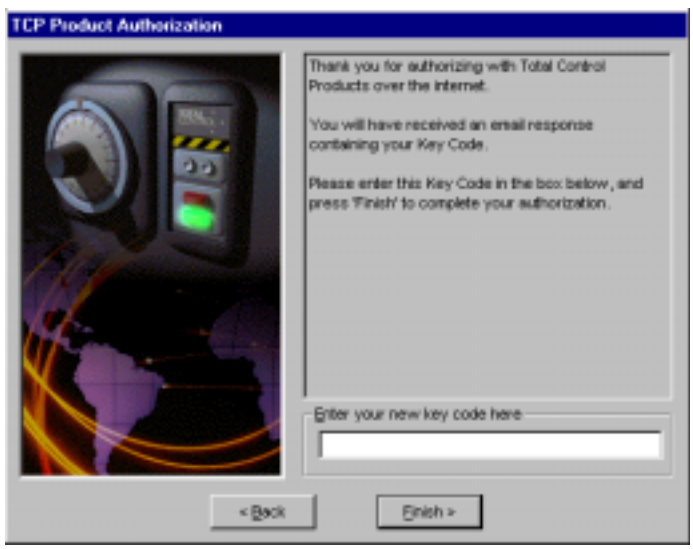
Completing Product Authorization

After receiving the Email reply, start the Product Authorization program by going to Start/Programs/Total Control Products and selecting Product Authorization. Click the Software Keys button.

Select the "Key Code" button from the main software authorization dialog.



Enter the Key Code and click the Finish button.

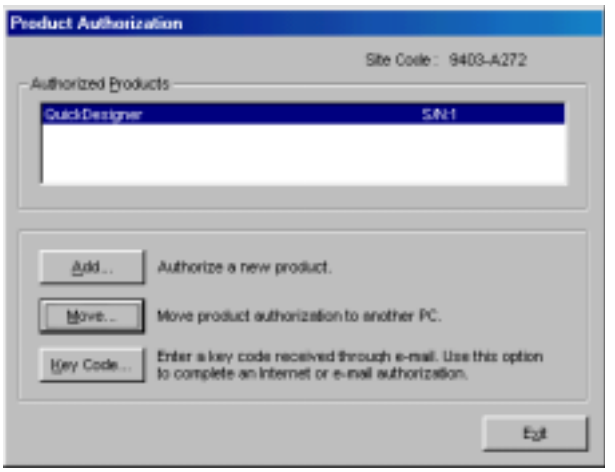

TCP Product Authorization
Thank you for authorizing with Total Control Products over the Internet.
You will have received an email response containing your Key Code.
Please enter this Key Code in the box below, and press 'Finish' to complete your authorization.
Enter your new key code here
< Back
Finish >

You can use QuickDesigner software to create projects only for a limited time unless it is properly authorized.

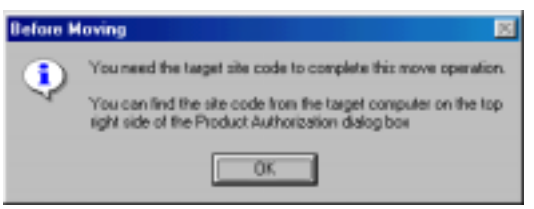
Moving the Product Authorization

The software license agreement allows you to install QuickDesigner on several PCs but restricts you to using the full authorized version on one PC. You can move the authorization from one PC to another by utilizing the Move option in the Product Authorization dialog box. The operation consists of moving the authorization from the Source PC to a floppy disk, then to the Target PC. The following dialog box shows QuickDesigner, S/N 1 as an authorized product.

To move the product authorization to another PC, start the Product Authorization program and click the Move button.

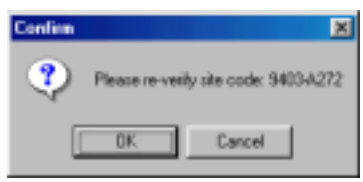


You will need the target site code to complete the move operation. The site code is found on the top right corner of the Product Authorization dialog box. A reminder message is displayed.


Before Moving
You need the target site code to complete this move operation.
You can find the site code from the target computer on the top right side of the Product Authorization dialog box
OK

Click OK to continue. The next dialog asks for the site code from the target device.

Enter the site code and click Next.You will be asked to verify the site code from the target device. This is IMPORTANT.



Click OK to continue. The next operation is to move the authorization to a floppy disk.

Insert a blank formatted floppy disk and click Next. A summary of the information appears.

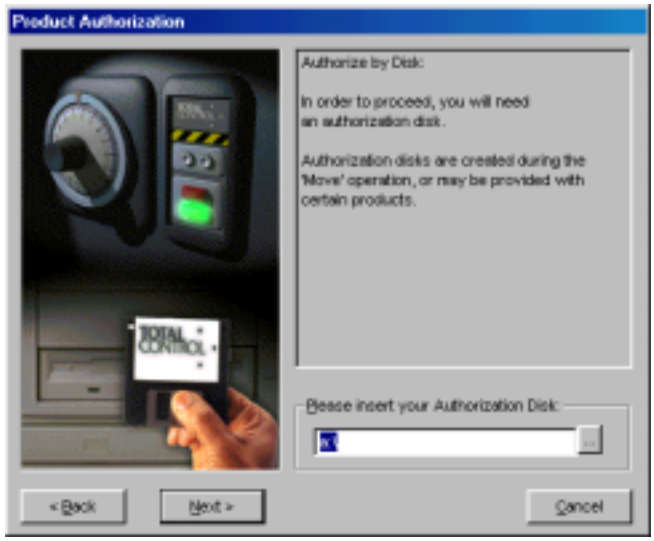
Product Authorization
SOURCE
TARGET
You have chosen to move:
Product: QuickDesigner
Serial #: 1
Name: a
Company: a
City: a
On the target device with the following Site Code:
Target Site Code: 9403-A272
WARNING: If the target Site Code above does not EXACTLY match the Site Code on the target device, you will lose the authorization for this product!
< Back
Finish >
Cancel

If the site code in the dialog box does not EXACTLY match the site code on the target device, you will lose the authorization for this product. Click Finish to write the information to the floppy disk. This disk can now be used to authorize the target device.

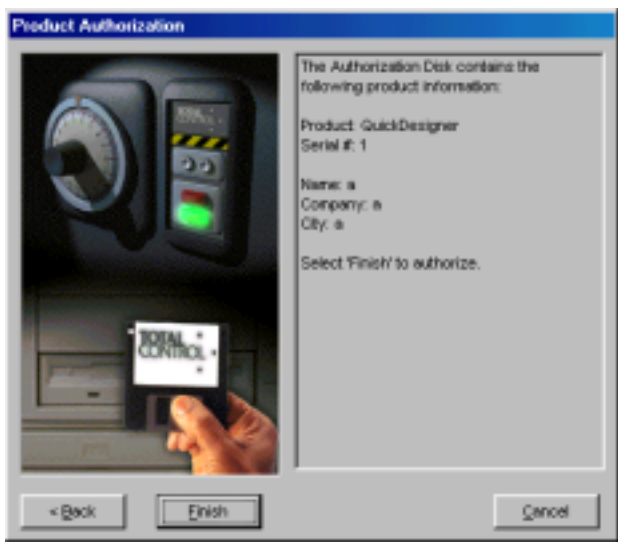
Please note that the site code of the Source machine is now changed.

To add the authorization to the target machine, start the Product Authorization program and click the Add button. You can authorize a product via the Internet/E-mail, by Phone/Fax, or by floppy disk.

Select Disk and click Next.


Product Authorization
Authorize by Disk:
In order to proceed, you will need an authorization disk.
Authorization disks are created during the 'Move' operation, or may be provided with certain products.
Please insert your Authorization Disk:
< Back
Next >
Cancel

Insert the authorization disk in your floppy drive and click Next.



A summary of the authorization information is displayed. Click Finish to transfer the authorization to the target machine. A confirmation message is displayed.

Starting QuickDesigner

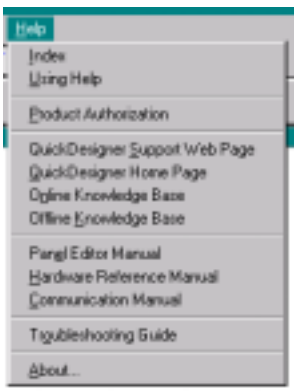
To start QuickDesigner, click

, Navigate through the **Programs** folder to the **Total Control Products** folder (or the folder where you installed Quick Designer) and select the **Quick Designer v3.xx** from the list.

After the software starts up, the Quick Manager appears. Quick Manager helps you set up and track projects for your QuickPanels. For a tutorial, see the Quick Tour in the next section.

Help Menu

The Help menu now has selections for Product Authorization, Web support pages, Knowledge Base documents, user manuals and links to troubleshooting guides.



Product Authorization

The Product Authorization procedure requires that you authorize QuickDesigner for full use on your computer. Unauthorized versions can be used to create projects but they cannot be downloaded to a QuickPanel display. You can authorize the software via Phone/FAX or the Internet.

QuickDesigner Support Web Page

QuickDesigner support home page on the Total Control Products web site. You must have a web browser installed to view these pages.

If the Users web browser is not IE or the path to the web browser is not correct the following error dialog will be shown.

Quick Manager
Failed to locate a web browser.You must have a web browser installed to view this help link.
Please modify the WebBrowser key in the QDHELP.INI file to point to your web browser.
The QDHELP.INI is located in C:\QUICK\
OK

QuickDesigner Home Page

QuickDesigner home page on the Total Control Products web site. You must have a web browser installed to view these pages. See the warning in Tech Support Web Page.

Online Knowledge Base

The Help menu has a selection for the Online Knowledge Base page on the Total Control Products web site. You must have a web browser installed to view these pages.

Offline Knowledge Base

The Knowledge Base files may have been added to your system during installation. The Help menu has a selection for the Offline Knowledge Base. You must have a web browser installed to view these pages. These files can be found in the default directory Quick/Qd_kb.

Panel Editor Manual

If you selected the Typical installation, user manuals in PDF format, along with Acrobat Reader, were added to your system. The Panel Editor manual contains all the information about Installation, Software Authorization, QuickManager, QuickDesigner, QuickCourier, Tags, Alarms, etc. When you click on this link, the manual is opened with Adobe Acrobat Reader. This manual can also be found on the installation CD.

Hardware Reference Manual

If you selected the Typical installation, user manuals in PDF format, along with Acrobat Reader, were added to your system. The Hardware Reference manual contains information about QuickPanels, cable diagrams, cutout diagrams, bezels, option modules, keypads, and maintenance procedures. When you click on this link, the manual is opened with Adobe Acrobat Reader. This manual can also be found on the installation CD.

Communication Manual

If you selected the Typical installation, user manuals in PDF format, along with Acrobat Reader, were added to your system. The Communications User Manual contains information about communication protocols including cable diagrams, setup information, and tag variable tables. When you click on this link, the manual is opened with Adobe Acrobat Reader. This manual can also be found on the installation CD.

Troubleshooting Guide

The troubleshooting guide provides a variety of topics that give suggestions and tips on troublshooting common issues. This guide covers both QuickDesigner related issues and QuickPanel runtime issues. A list of protocol related error codes is included in this guide.

Installation Notes

Answers to common technical Questions

For additional Trouble Shooting tips, see the Appendix.

Q: Your 'old' version of *QUICK DESIGNER* cannot get to its data files.

A: See 'Understanding your data files' in the next section.

Q: 'Setup' procedure said that my 'current data files' are incompatible.

A: Unfortunately if you have data files which were created prior to V1.02, we cannot convert your old data files to the new format. You will simply have to install the new *QUICK DESIGNER* in a different directory. In order to run your old *QUICK DESIGNER*, please see section on 'Understanding your data files' in this file.

Q: *QUICK MANAGER* thinks that a PROJECT is in use, even though it is not.

A: On occasion, the *QUICK MANAGER* will not allow you access to certain projects even though you are certain that it is not so. It will either gray-out the all the controls or complain that the projects are in use. See the Warning Message section of *QUICK MANAGER* in the user manual or the Help file.

Q: The *QUICKPANEL* does not communicate to my PLC, what should I check?

A: Make sure that the *QUICKPANEL*'s serial port is set up correctly. Note that each PLC manufacturer has their own unique comm ports setups. See the section for your PLC in the communications chapter in the *QUICKDESIGNER* User Manual for correct setups.

Q: How can I get my company logo to appear on a panel?

A: Refer to *QUICKDESIGNER* User Manual on bitmaps.

Understanding your data files

All your data files are stored in the subdirectory called 'DATA' below the directory where you installed the QUICK DESIGNER. For example, if you had 'C:\QUICK'as your installation path, your data would be stored in the 'C:\QUICK\DATA' directory. This directory is known as the 'data directory'.

The QUICK DESIGNER identifies the location of your data files by via database routing file. Now, what is a 'database routing file', also known as a 'DRF' if you are so inclined. It is simply a text file, which tells us where the data directory (see above) is located. If you looked into the database routing file, you will see statements such as:

```
DBDPATH=C:\QUICK\DATA\
DBFPATH=C:\QUICK\DATA\
DBFPATH=C:\QUICK\DATA\
DBFPATH=C:\QUICK\DATA\
LOCKMAN=internal
```

Note that each item is assigned to (points to) the data directory 'C:\QUICK\DATA'. If you had installed QUICK DESIGNER to the 'C:\BestPrgm' directory, you would see the follwing files in the database routing file (DRF).

```
DBDPATH=C:\BestPrgm\DATA\
DBFPATH=C:\BestPrgm\DATA\
DBFPATH=C:\BestPrgm\DATA\
DBFPATH=C:\BestPrgm\DATA\
LOCKMAN=internal
```

The QUICK DESIGNER's default database routing file is 'MEDUSA.INI'. This file resides in your installation directory. Each time the QUICK MANAGER (QMGR.EXE) program is executed, it looks for this file to tell it where the data files are located.

If you decide to, or already, have data files in a different data directory (for example, you installed two copies of the QUICK DESIGNER in different directories), you have two courses of action.

a) You may manually modify the the contents of the default database routing file (MEDUSA.INI) file to point to the data directory you want to use, or

b) You may create an alternate database routing file (a .INI file in the MS-Windows directory) that points to a different directory and use it instead. Use the QUICK MANAGER's menu: 'DATABASE - Open' to select your alternate database routing file.

Note: Some versions of the QUICK MANAGER require you to 'close' the 'Projects' window, followed by 'closing' the current database before you have access to the 'DATABASE - Open' feature.

* You may use the 'MS-Windows Notepad' to view the database routing file. For more information about the 'MS-Windows Notepad' consult your MS-Windows documentation.

Reinitializing your data files.

- If for some reason the database becomes unstable (you will see error message boxes with the 'RAIMA' caption) you MAY need to reinitialize the database.

WARNING!

Reinitializing the database will permanently delete all your Projects, Panels, and Tags. The procedure for reinitializing the database is as follows:

(1) Change directory to where you installed the QUICK DESIGNER.

cd \QUICK <cr>

(2) From there, change directory to the DATA directory.

cd DATA <cr>

(3) Execute the batch file called Clean200.BAT.

Clean200 <cr>

WARNING!

The 3 steps above will reinitialize the database and permanently delete all your Projects, Panels, and Tags.

Quick Tour

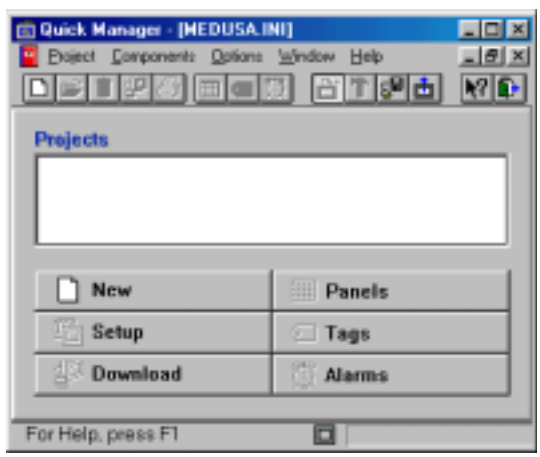
Overview

The Quick Tour section is designed to take you through a simple project using a Modicon PLC and a *QUICKPANEL jr.* as the target display. This project contains the basic elements of all projects. You can substitute your PLC type for those instances where Modicon is used. You will be shown most of the dialog boxes but only a few require any input or changes.

We strongly suggest that you read the Quick Tour section and attempt a simple project. Make sure you are able to design a simple panel and download it to the target display. When you have the target display communicating with your PLC, then proceed to designing more panels. You should download each panel and test it before designing the next.

Quick Project Setup

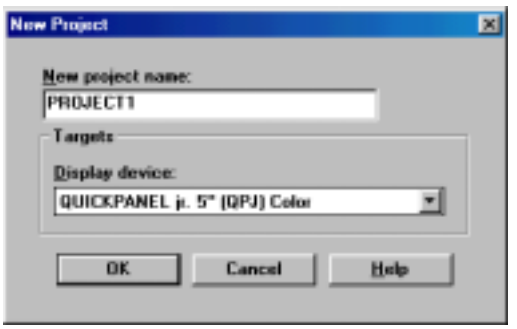
Click the *Quick* icon to start the editor. The following dialog is displayed. We assume this is the first time you are using the software and there are no projects previously created.



Note that there are no projects listed in the window and several menu buttons and tools are greyed out (inactive). Click the New button to display the New Project menu.

New Project

The New Project dialog is used to enter a title for a new project and pick a target display device.



Type "PROJECT1" for the project name and press TAB to move the cursor to the Display device pull-down selector (the down arrow to the right of the text field).

Select **QUICKPANEL jr. 5" (QPJ) Color** as the display device. If your target device is different, select it from the display device list. This example assumes you are using the *QUICKPANEL jr.* 5" color display.

Click OK and the Project Setup dialog will appear.

Project Setup

The project name will appear in the project name text field at the top of the dialog box. You can change it by typing a new name. If you click the More button, the Additional Project Setup dialog box will appear. The Additional Project Setup dialog box is used to enter the Author name and project notes.

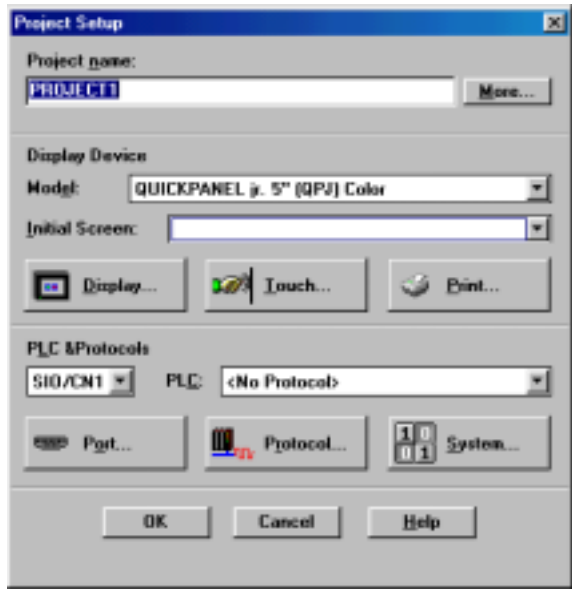
The next section of the Project Setup dialog box is labeled Display Device. The model selected is shown in the Model list box. You can change the display device by clicking the down arrow button and picking a new target display.

The Initial Screen is the first panel displayed when the power is cycled. Leave this blank for now.

The Display button brings up the Display Configuration dialog box, which is used to select the initial screen and the Screen Saver timeout. The initial screen is the one that appears after a power cycle. Screen saver timeout is a timer that starts after someone touches the screen. If the screen is not touched again before the timeout period, the screen goes blank. A setting of 0 will keep the display on constantly. Click Cancel.

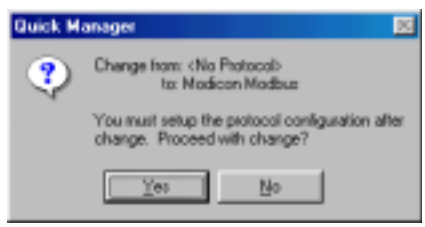
The Touch button brings up the Touch Screen Configuration dialog box. You can turn the beeper ON(Enable) and OFF(Disable). (You may want to turn it OFF when using the display in an office environment). Click OK. The Touch button is also used to enable the operation of the external keypad.

The Print button sends the panel image to a printer. Leave this alone for now.

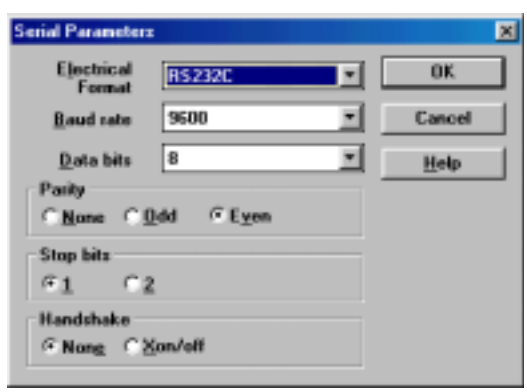


The next section of the Project Setup dialog box is labeled PLC & Protocols. This section is used to select the PLC protocol and setup the communications for the display. There is only one choice for the main serial interface port, which is designated SIO/CN1. Click on the down arrow located on the right side of the PLC Type field to display a list of PLC types. Click on Modicon Modbus.

When you change protocols, the following prompt is displayed. The prompt reminds you that the protocol you have just selected must be setup after the change. Click Yes to acknowledge the prompt.

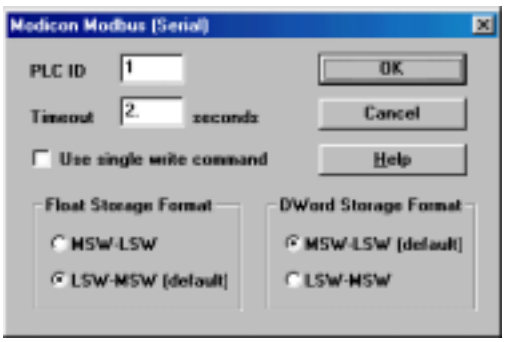


Click the Port button to setup the main serial port (CN1) on the display. The Serial Parameters dialog is displayed. This dialog box is one of the most important, because it defines the communication settings between the display and your PLC.

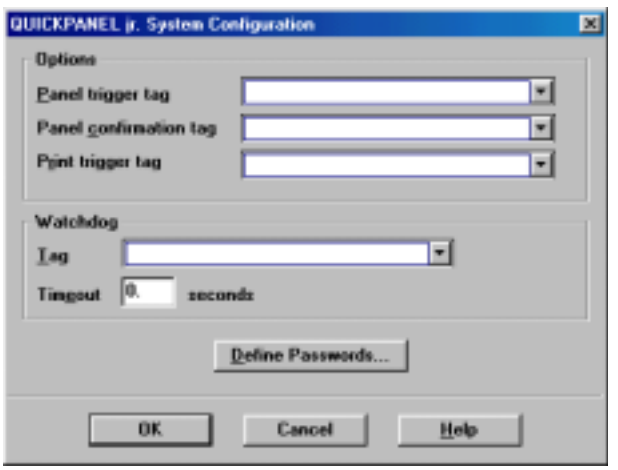


The settings **MUST** match those of your PLC. The settings shown in the dialog box are *default* settings and may not be correct for your project. When you start a real project, you may want to write down the settings and verify they are the same as those on your PLC. Click OK.

Click the Protocol button to setup the optional parameters for a particular PLC type. These parameters **MUST** also match those of your PLC. The settings shown in the dialog box are *default* settings and may not be correct for your project. The Modicon Modbus dialog box is shown below. Click OK.



Click the System button to open the System Configuration dialog box.

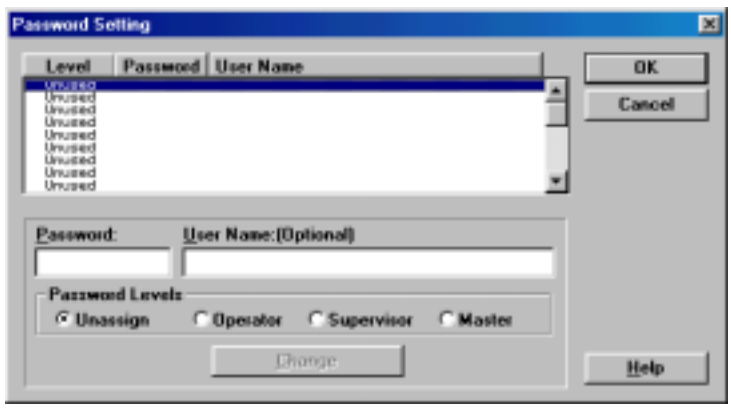


The panel trigger tag allows a register in your PLC to control the selection of panels. You can allow the operator to select panels, the PLC to select panels, or a combination of the two. The Panel confirmation tag is a register that gets a bit set when a new panel is selected.

The watchdog is a register in your PLC that is periodically checked to determine if the communication link is still operational. Each timeout period, the display sends a value to the watchdog register. The PLC waits for a specified period, then checks the contents of the register. If there is a value in the register, the link is working. The PLC then clears the register and begins waiting again. The watchdog operation requires some PLC ladder logic for proper operation.

Pressing the Define Passwords button will display the Password Setting dialog box. You can password protect one or more panels in a project. You can setup passwords for up to 16 users. The password is a numeric value from 0 to 65535 with up to three levels of security. For each protected panel in a project, a security level of Operator, Supervisor, or Master is selected. During run time when a protected panel is selected, a numeric data entry panel is displayed prior to accessing the panel. A proper numeric password must be entered which is equal to or greater than the assigned security level, otherwise access is denied. The Master level can access all panels.

To assign a password, select an unused line, enter the password and optional user name, select a password level, then click the Change button. Edit the password by selecting the line, making required changes and clicking the Change button. Remove password assignments by selecting a line, select Unassign and click the Change button.



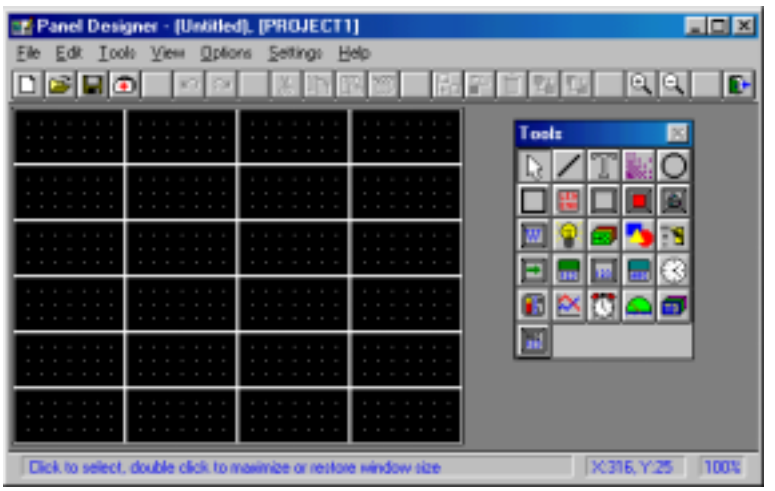
To set the password for a single panel, open the panel then go to the Settings menu and select Panel. The Panel Settings dialog will appear. From the Password Level list box, select No Password, Operator, Supervisor, or Master. More information about assigning passwords can be found at Define Password Button on page 40 and Password on page 128.

You are now done with the Project Setup dialog so click the OK button to return to the *QUICKMANAGER* dialog.

QUICKDESIGNER

The project now has a title and the necessary configuration information. The next step is to design the panels for the project. Click the Panels button to open the *QUICKDESIGNER* panel editor window.

You can also click the panels icon on the toolbar.

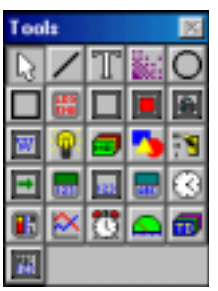

Panel Designer - [Untitled], [PROJECT1]
File Edit Tools View Options Settings Help
Tools
Click to select, double click to maximize or restore window size
X:316, Y:25
100%

The panel editor window opens with a new panel ready to edit. The panel size depends on the type of display you selected in the setup dialogs. It is a good practice to save the panel as soon as you start working on it.

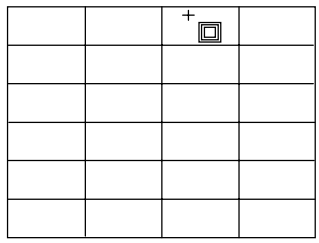
The first time you open the *QUICKDESIGNER* panel editor menu, the Tools menu may be placed on the grid. Place the cursor over the title of the tool box (Tools), click and hold the left mouse button to move the Tools menu off the grid.

Create a Panel

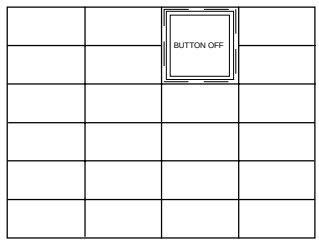
Click the illuminated push button icon on the Tools menu or select the illuminated push button from the Tools pull-down menu. The status line at the bottom of the screen will indicate which tool you have selected. The illuminated push button is a combination push button and pilot light.



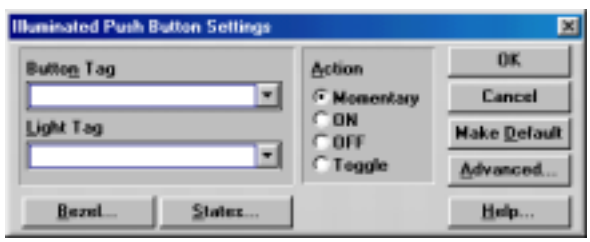
Move the arrow cursor into the grid area. A cross hair will appear with a small image identifying the type of tool selected. Move the cross hair to the cell shown in the drawing and click the mouse. Note the message in the status line at the bottom of the window.



The illuminated push-button object will appear across two cells.



The Illuminated Push Button Settings dialog box will also appear.



Push Button Tag Variable

The illuminated push button consists of two parts; the push button and the pilot-light indicator. When the button is pushed, it changes a bit in a PLC word. Generally, the pilot light is assigned to monitor the bit controlled by the push button.

A "tag" variable name must be assigned to the push button. This tag will be a single discrete bit in the PLC memory that the target display can control. Type OD0100 for the button tag and press TAB.

Pilot Light Tag Variable

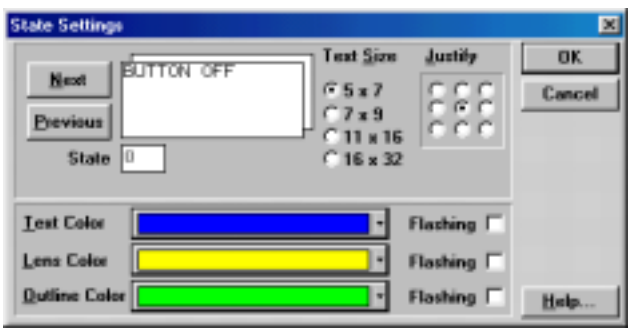
A "tag" variable name must be assigned to the pilot light. This tag will be a single discrete bit in the PLC memory that the target display can read. When the bit is ON the pilot light is ON. Type OD200 for the Pilot Light tag and press TAB.

Bezel

The Bezel portion of the push button presents a visual indication to the operator that the button has been pressed. Click the Bezel button to display the Bezel Settings dialog. Click the Simulate button to see how the bezel changes colors. Click OK to return to the main push button dialog.

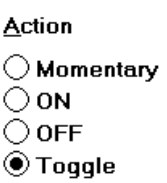
States

Click on the States button to display the State Settings dialog. A push button has two states; ON and OFF. You can change the text and appearance of each state. Use the Next and Previous buttons to select a different state. The last state selected will be the one displayed when you click the OK button. Click OK to return to the main dialog.



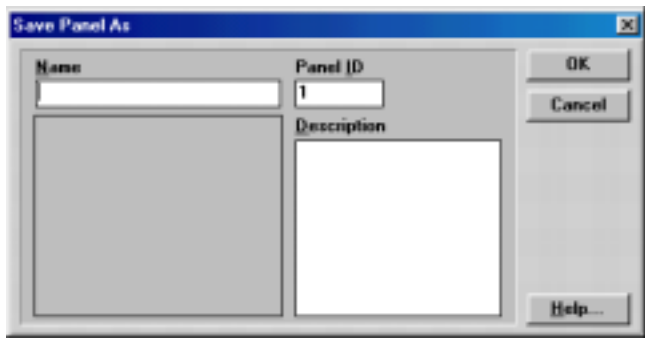
Action

The manner in which the push button tag will be controlled is defined by selecting an "Action". A common action is toggle, where the PLC bit (tag) is turned ON when the push button is pressed and turned OFF when the push button is pressed again. Click the Toggle button.



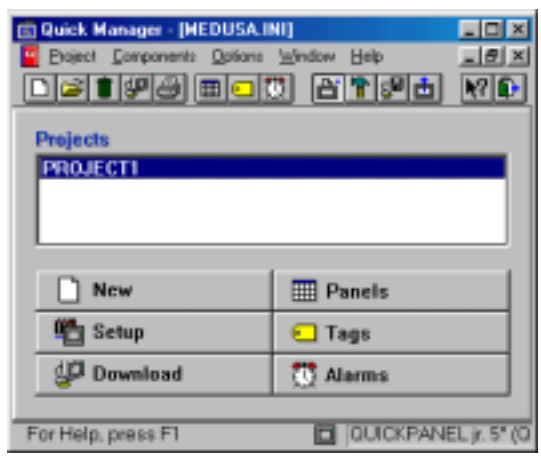
Click the OK button to save the illuminated push button settings.

Click the File menu and select Save from the pull-down menu, or click the save icon. When the Save Panel dialog appears, type Panel1 for the file name.



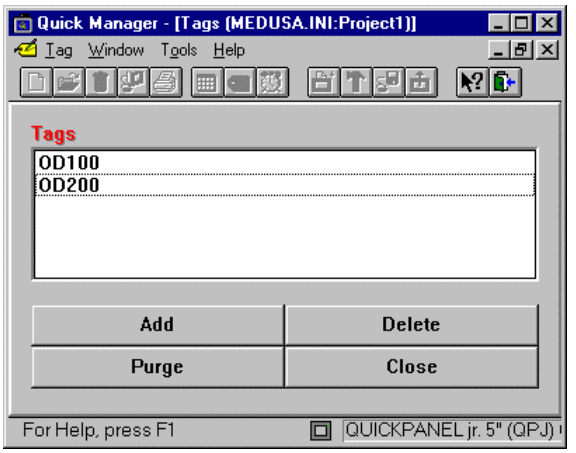
Press TAB until the cursor is located in the Description window. Type SINGLE ILLUMINATED PUSH BUTTON then click the OK button.

Click the File menu and select Exit. The *QUICK MANAGER* window will return.

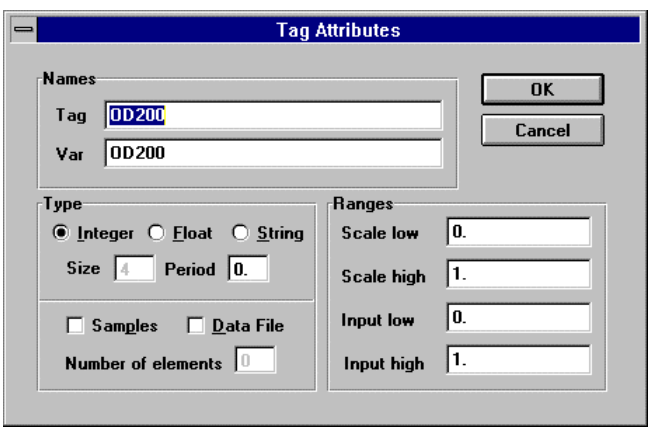


Tags

The tags menu will allow you to view the tags created for the current project. You can easily add, delete, cut, paste, and copy tags. You can purge (delete) all of the tags from the current project. Click the Tags button for the following menu.



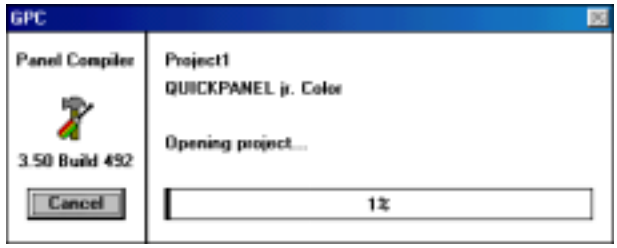
If you select Tag Attributes or double click one of the tag names, the Tag Attributes dialog will appear. Do not change any settings. Click OK to close the Tag Attributes dialog and return to the Tags dialog. Click the Close button to exit Tags.



Download Panel

Before you attempt to download a panel, you must connect the HMI-CAB-C49 cable between an unused comm port on your computer and the target display.

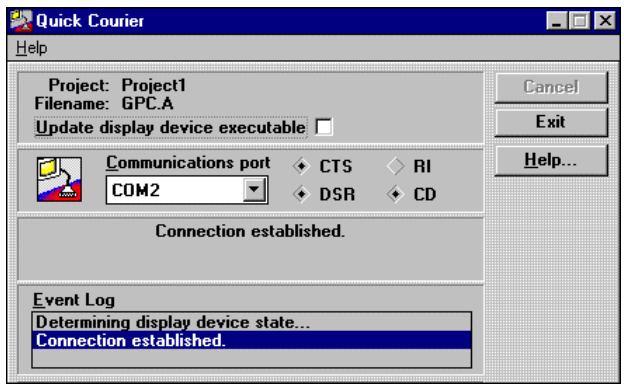
Click the Download button or click the Download icon to download the new panel design to the target display. The first operation that appears on the screen is the compiler (GPC), which compiles the selected project into code the target device can accept. (Your compiler display may look slightly different)



When the compile operation is complete, the *QUICKCOURIER* menu is displayed.

Follow the prompts which are displayed by *QUICKCOURIER*..

QUICKCOURIER will determine the condition of the display and begin loading the required files. A bar graph will display the loading progress.



Below the bar graph will be a display device status information box which gives you some general information about the display.

When the application download is complete, *QUICK COURIER* will close and the *QUICK MANAGER* program will return. Since no default panel was selected, the panel with ID number 1 will be displayed. If no default panel is selected and there is no panel with ID number 1, then the screen will be blank except for the name of the protocol shown on the bottom.

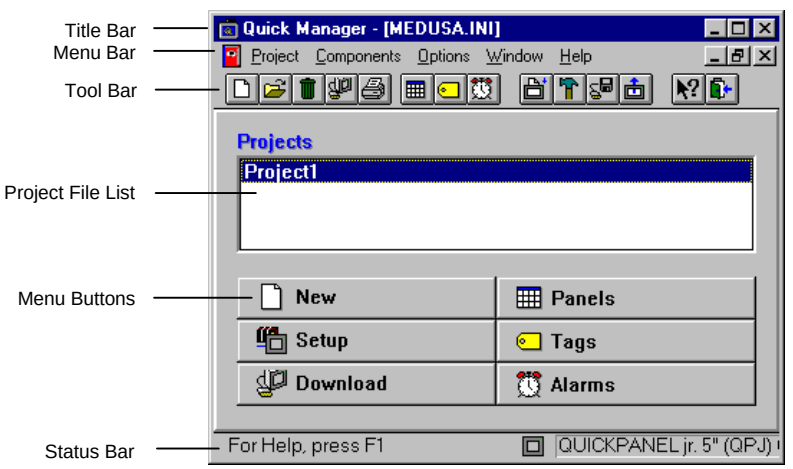
If you had a real Modicon Modbus PLC attached to the *QUICKPANEL jr.* display, the push-button would operate. Pressing the push-button would set OD0100 to a 1. In this tutorial, the ladder logic in the PLC is written so that setting OD0100 to a 1 will cause OD200 to also be set to 1. The Pilot Light tag variable for the push-button is tied to OD200, so it will go on. The push-button was selected to be a toggle type button. Pressing the push-button again will cause OD0100 to be set to 0 and OD200 to be set to 0. The pilot light section of the push-button will go out.

You had to read about ten pages of this tutorial in order to create your first push-button. It might have taken you about ten minutes to complete the exercise. Now that you are familiar with the operations, it should take you a minute or two to create another button or pilot light. Just think how much time and money you have saved! You can add an object to your control panel in less than two minutes with no wiring changes! That's *QUICKPANEL*!

QUICKMANAGER

QUICKMANAGER Window

QUICK MANAGER is used to set up a project file that contains the type of PLC used, the serial communications attributes, and other information required for a project. From the manager window you can jump to the panel editor, which is used to design panels. You can jump to the tag editor to add or modify the tag list. You can jump to the alarm manager to setup the alarm processor. When you have completed a project, you can click the download button to send the completed project to a target display. The *QUICK MANAGER* window is shown below.



Menu Bar

Windows™ commands are listed on menus. Menus are represented by names in the menu bar at the top of each application window. In Windows™, you select a menu, and then choose a command from that menu. Choosing the command carries out the action. The menu bar for the *QUICK MANAGER* is shown below.

The items listed on menus are most often commands that represent actions you can tell the application to carry out. Some menu items appear dimmed, some have check marks next to them, some may have ellipses (...) after their names, and others may have key combinations listed across from them.

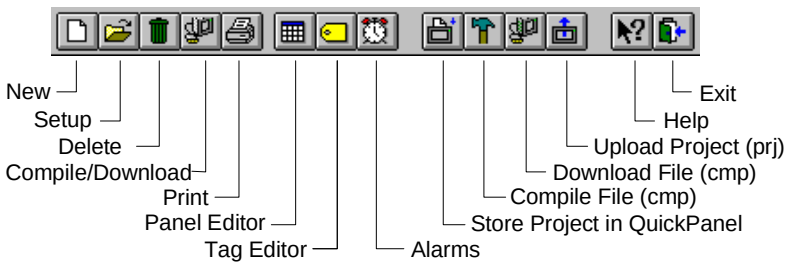
Windows™ applications all follow certain conventions when listing items on a menu. These conventions signal that extra information about the menu commands will follow.

MENU CONVENTION	DESCRIPTION
Dimmed command name	The command is not available at this time.
An ellipsis after the name	A dialog box will appear.
A check mark next to the name	The command is active.
A key combination after the name	A shortcut for this command.
A triangle at the right side	The command leads to a cascading menu.

To choose an item from a selected menu, click the item name.

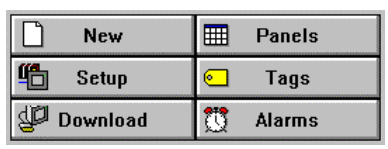
Tool Bar

The tool bar contains icons relating to frequently used commands found in the menu bar. By clicking an icon, you gain instant access to commands. The *QUICK MANAGER* tool bar is shown below.



Menu Buttons

The large menu buttons perform the same functions as the icons in the tool bar, except the buttons are easier to locate and identify their function. The menu buttons also resize when the window is resized. The *QUICKDESIGNER* menu buttons are shown below.



Project File List

The Project File List contains all the projects available to the *QUICK MANAGER*. You can create multiple projects, each with a different target display and PLC type. Projects can use panels from other projects by using the copy and paste functions.

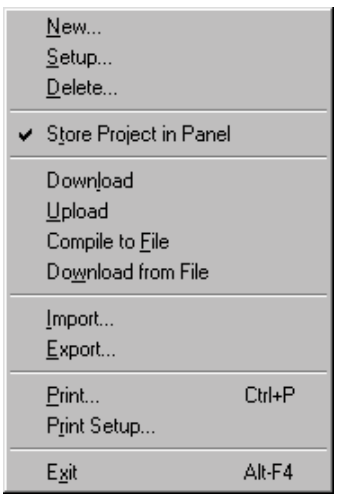
Status Bar

The status bar displays operator prompts to aid you in using the manager and designer tools.

Project Menu

The project menu contains options for creating new projects, changing the setup for existing projects, deleting unwanted projects, and downloading projects to target displays. The import option allows you to use projects created on another system, while the export option allows saving an entire project. There are several new tools which are designed to make the process of compiling and downloading files easier and more flexible. The tool bar buttons have corresponding entries in the Project menu.

You can exit the project menu by clicking the exit option or by clicking the exit icon in the tool bar. Note that you can quickly exit the project menu by using the ALT-F4 key combination.



Project Menu Overview

New… Allows you to start a new project. This functions the same as the icon and the NEW button on the Quick Manager screen.

Setup… Allows you to edit project information such as screen saver, initial display screen, PLC protocol, panel passwords, etc. See Setup for more information. This functions the same as the Setup button on the Quick Manager screen.

Delete… Allows you to delete the selected project from the project list. This functions the same as the trashcan icon on the toolbar.

Store Project in QuickPanel… This feature (when selected) allows you to store a compiled copy of your QuickDesigner project into your QuickPanel. This file is needed to use the Upload functionality.

Download… This selection compiles the selected QuickDesigner application then downloads the application to the QuickPanel using Quick Courier.

Upload… This feature allows you to upload (receive from the QuickPanel) a project file. You must use the *Store Project in QuickPanel* option (when downloading) to send the project file to a QuickPanel.

Compile to File… Creates a compiles file of the QuickDesigner application and allows you to store it for later use.

Download from File… Allows you to download a previously compiled file. This saves time because you do not have to wait while the file is compiled.

Project - New

There are three ways to start a new project; click the New icon in the tool bar, select New from the Project menu, or click the New button.

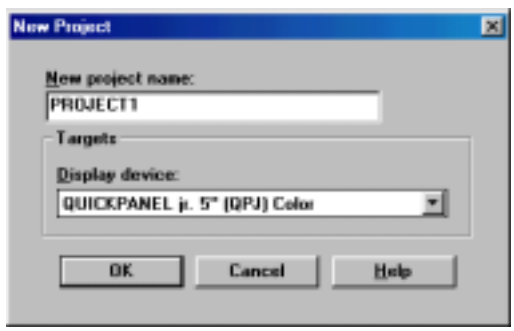
The New Project dialog box is shown below.

New Project Name

Enter the project name then use the TAB key to move to the Display device list box.

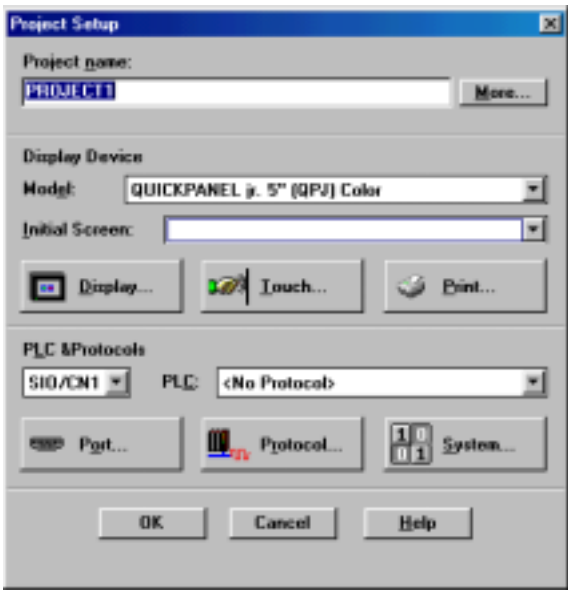
Display Device

Select a target display device by clicking the drop-down list box and selecting the target display type. Click OK to continue.



Project - Setup

The Project Setup dialog box can be selected in three ways; click the Setup icon in the tool bar, select Setup from the Project menu, or click the Setup button.

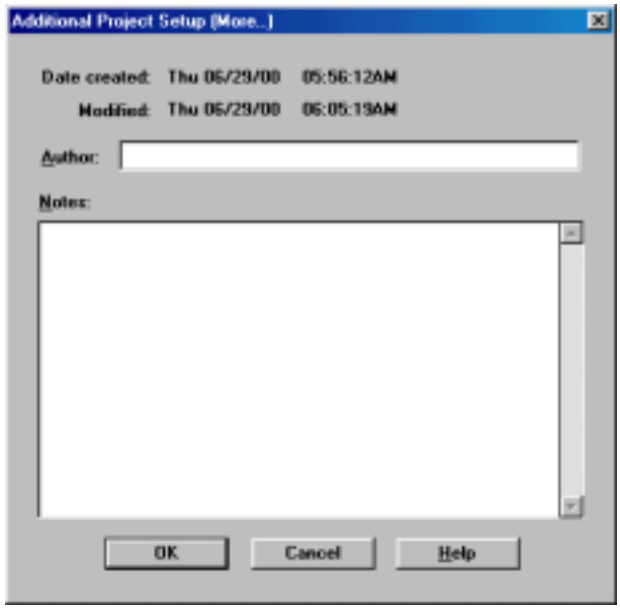


Project Name

The Project Setup dialog box will display the name of the project to remind you of which project you are working on. You can change the name of the project by deleting the old name and entering a new name.

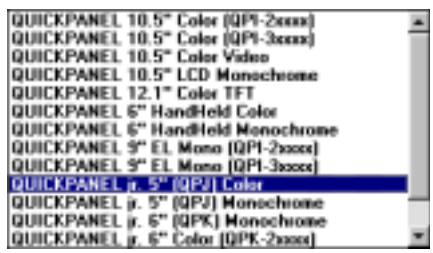
More Button

If you click the More button, the Additional Project Setup dialog box will appear. This dialog box is used to enter the Author name and project notes.



Model

The Display Device section will indicate which target display model you selected for the current project. You can change the display device model by clicking the arrow button and picking a new target display. The following is a sample of the display list. The list changes for different versions of software.


QUICKPANEL 10.5" Color (QP1-2xxxx)
QUICKPANEL 10.5" Color (QP1-3xxxx)
QUICKPANEL 10.5" Color Video
QUICKPANEL 10.5" LCD Monochrome
QUICKPANEL 12.1" Color TFT
QUICKPANEL 6" HandHeld Color
QUICKPANEL 6" HandHeld Monochrome
QUICKPANEL 9" EL Mono (QP1-2xxxx)
QUICKPANEL 9" EL Mono (QP1-3xxxx)
QUICKPANEL jr. 5" (QPJ) Color
QUICKPANEL jr. 5" (QPJ) Monochrome
QUICKPANEL jr. 6" (QPK) Monochrome
QUICKPANEL jr. 6" Color (QPK-2xxxx)

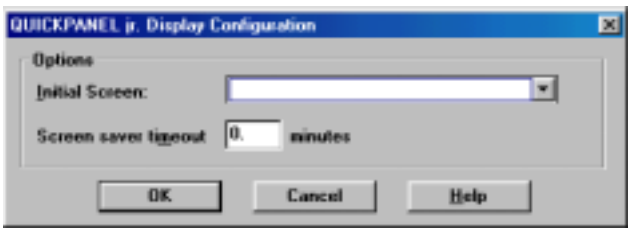
NOTE The QuickPanel Mini 6" Monochrome display has a limited set of tools in the panel design toolbox. See Tool Box on page 100.

Initial Screen

The Initial Screen is the first panel displayed when the power is cycled. See Initial Screen in the next section.

Display Button

The Display button brings up the Display Configuration dialog box, which is used to select the initial screen and the Screen Saver timeout.



Initial Screen

This is the panel that will appear after a power cycle has occurred on the target display. When you first begin a project, this list box will be empty. If you know the name of the power-up panel, enter it now. You can come back to this dialog box after all your panels are completed. If you leave the *Initial Screen* entry blank, the panel with ID #1 will be displayed. If no panel in the project has the ID #1, then the screen will be blank except for the name of the protocol on the bottom of the display.

NOTE If the Initial Screen name does not match a name in the drop-down list box, the display screen will go black after the panels are downloaded. Choose the initial screen name from the list box to insure you have the correct name. **Panel names are case sensitive**.

Screen Saver Timeout

The screen saver feature will turn off the screen after a selected time period. Simply touch the screen to turn the display back on. The *first* touch will not affect panel objects. Enter the timeout period in minutes. The range is 0 to 255 minutes. A value of 0 (0=default) will force the screen to remain on.

Touch Button

The Touch button brings up the Touch Screen Configuration dialog box.

Disable Beeper

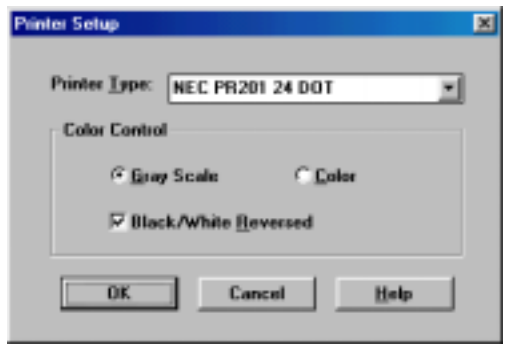
The beeper sounds each time an active screen operator is touched. You can disable the beep by checking the Disable Beeper checkbox. If you are developing a project in an office environment, it would be courteous to turn the beeper OFF.

Keyboard Attached

If you have installed an optional keypad such as the HMI-KPN-201, click this checkbox. If the display type you are using does not have an available keypad option, this dialog box message will appear disabled (greyed out).

Print Button

The Print button brings up the printer setup dialog box. Select the printer type from the list box. Other printers may work if they are compatible to one of the printers in the list box. See the Print option on page 43 and the printer information in Appendix B.



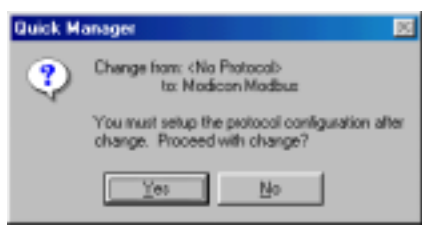
Port Selector

The port selector is a list box that indicates which port is currently being setup. This list box has only one entry now, but may have more in the future. The main serial port is generally called the CN1 or SIO port.

PLC Type

The PLC Type list box shows which protocol you selected for the current project. Click the down arrow on the right side of the list box to view the entire list of protocols. Select a new protocol by clicking on the desired name.

If you select a protocol different from the current protocol shown in the PLC Type list, the following prompt is displayed. The prompt reminds you that the protocol you have just selected must be setup after the change. Click Yes to acknowledge the prompt.

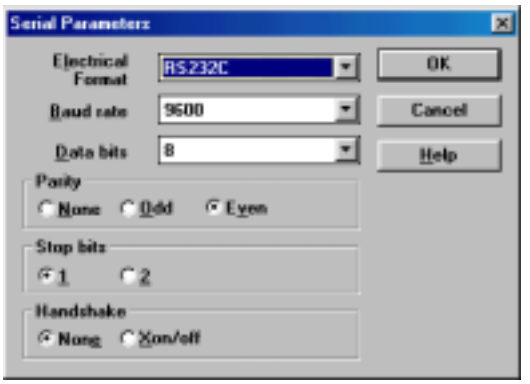


Port Button

The Port button will display the Serial Parameters dialog box. Select RS232 or RS422/485 Half or Full Duplex protocol for the target display serial port. Make sure the communication settings are the same as those for your PLC. The settings shown in the dialog box are default settings and may not be correct for your PLC type.

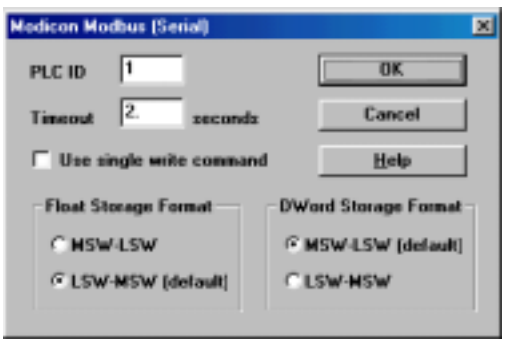
NOTE Make sure the target display and PLC have the same communication parameters. A majority of interface problems are related to improper communication settings and

cables.



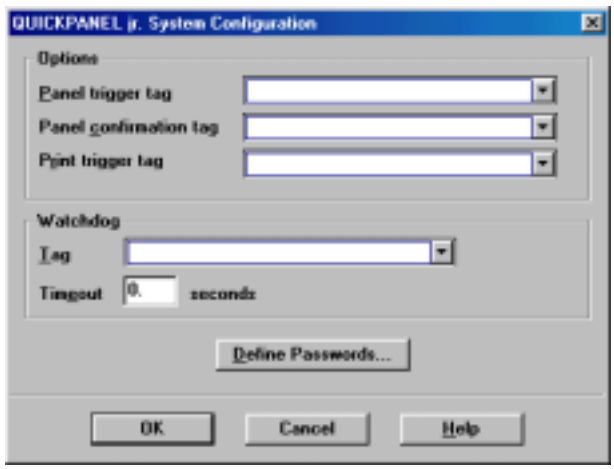
Protocol Button

The Protocol button will display the unique protocol dialog box for the protocol selected in the PLC Type list box. Make sure the settings match those of your PLC. An example protocol is shown below. Each supported PLC has a dedicated chapter in the Communications User manual.



System Button

The System button will display the System Configuration dialog box. The Options and Watchdog sections are optional and are not required for project communications.



Panel Trigger Tag

The *Panel Trigger tag* is a register in the PLC that can be used to select a panel for display. Each panel has a unique Panel ID number which is displayed when you save or open a panel.

When the panel ID number is put in the PLC trigger register, the selected panel will be displayed. The panel change occurs ONLY when the value in the register changes and the change overrides anything else being displayed. If you leave *Panel trigger tag* blank, panel selection is done using the GOTO PANEL buttons only.

You can use a combination of Panel trigger tag and GOTO PANEL buttons. The operator can select different panels by pressing a GOTO PANEL button, and the PLC can select a panel by changing the panel ID number in the Panel trigger register. In this situation, the GOTO PANEL button will write the panel ID number to the Panel trigger register to initiate the panel change. The important point to remember is that a new panel is displayed when a change occurs in the PLC trigger register.

NOTE If you use Panel Trigger Tag, you should also select a Default Panel. If the Panel Trigger Tag in your PLC is equal to 0 or an unused panel ID number, and you don't use a Default Panel, the target display screen will be blank after downloading.

Panel Confirmation Tag

The Panel Confirmation Tag is an internal or PLC tag address that will contain the current panel ID number. Whenever you select a new panel (using the GotoButton or Panel Trigger Tag) the Panel Confirmation Tag address will be updated with the ID of the current screen.

The Panel Confirmation Tag functionality is only available on panels created with the panel editor. The Numeric Data Entry Keypad panels, alarm panels, and any other panels that the program generates, do not have the Panel Confirmation ability. Therefore, if the user is on panel 9 and presses a Numeric Data Entry button, this will move them to the keypad entry screen, but the screen ID in the Panel Confirmation Tag address will not change.

Print Trigger Tag

The *Printl Trigger tag* is a register in the PLC that can be used to print the current screen when the PLC tag bit goes high. This operation will be invisible to the user. The printer tag is set to zero after a print is completed.

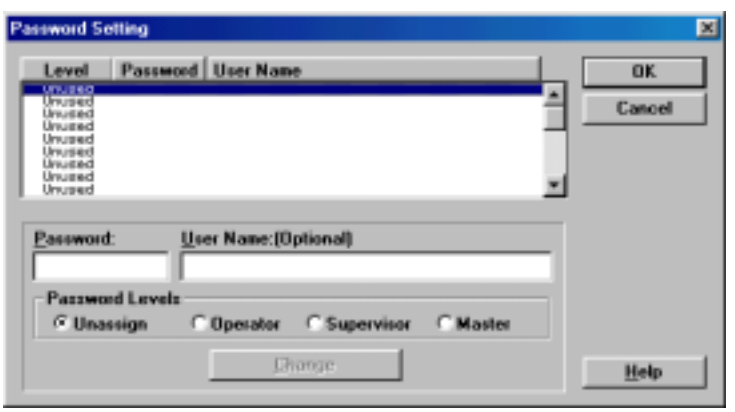
Watchdog Tag

The Watchdog tag selection is a register in the target PLC that is written to in intervals determined by the Timeout setting. The target display will write this register in the selected time period. Your PLC requires additional logic to examine and test the data in order to determine if a communication fault has occurred. A common technique is to set the watchdog register to 0, then examine it after the timeout period has elapsed. If the communication link is good, the watchdog register will have a value other than 0. Continue the cycle of setting the PLC register to 0 and testing the register. At any time after the timeout period the register is still set to 0, then there is a possible communication link problem. The target display will attempt to write an FF to the PLC watchdog register.

Define Password Button

Pressing the Define Passwords button will display the Password Setting dialog box. You can password protect one or more panels in a project. You can setup passwords for up to 16 users. The password is a numeric value from 0 to 65535 with up to three levels of security. For each protected panel in a project, a security level of Operator, Supervisor, or Master is selected. During run time when a protected panel is selected, a numeric data entry panel is displayed prior to accessing the panel. A proper numeric password must be entered which is equal to or greater than the assigned security level, otherwise access is denied. The Master level can access all panels.

To assign a password, select an unused line, enter the password and optional user name, select a password level, then click the Change button. Edit the password by selecting the line, making required changes and clicking the Change button. Remove password assignments by selecting a line, select Unassign and click the Change button.

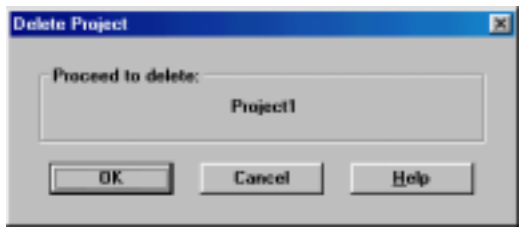


To set the password for a single panel, start the panel editor then go to the Settings menu and select Panel. The Panel Settings dialog will appear. From the Password Level list box, select No Password, Operator, Supervisor, or Master.

Project - Delete

This option will delete the selected project from the *QUICK MANAGER* project list. The name of the project appears in the information box. Select OK to delete the project or Cancel to abort the delete operation.

NOTE Once you delete a project, it is GONE! Be careful when deleting projects!



Project - Store Project in QuickPanel

The *Store Project in QuickPanel* button on the toolbar is normally enabled. When you open the Project menu, you will notice a check mark next to *Store Project in QuickPanel*. This is the default setting and indicates the option is enabled.

A project is a collection of information such as setup information for a QuickPanel display, setup for a PLC, panel designs, tags, and alarms. Projects can be saved in *.prj format for future editing. Projects are compiled for a unique QuickPanel display type, then downloaded to the display. The compiled file cannot be recovered, however, a project file can be loaded along with the compiled file. By default, the project is always stored along with the compiled file.

The memory required to save the project file should be about 10 to 15 percent of the downloaded file. This means that for most applications, there will be room to store a project file. QPI and QPK platforms have 1000K of storage, while the QPJ has 256K of storage. If you need more space for the compiled file, disable the *Store Project in QuickPanel* option and download the file again. You can disable the option by opening the Project menu and unchecking *Store Project in QuickPanel* or by clicking the corresponding button on the tool bar.

Project - Download

This option is used to send a file from the computer system running the *QUICKDESIGNER* software to a target display. See the *QUICKCOURIER* chapter on page 90 for details.

Project - Upload

Selecting *Upload* is the same as clicking the Upload Project button. The Upload Project button is used to upload a *project* file from a QuickPanel. The project file must have been saved with the downloaded file, otherwise an error message will appear. When the project file is uploaded, it is saved the same way as an imported project. The project can then be edited using QuickDesigner software. The file can be compiled and downloaded back to the QuickPanel or saved for other purposes.

Project - Compile to File

Selecting *Compile to File* is the same as clicking the Compile File button. The Compile File button will compile the current project and allow saving it to a selected directory. This allows saving compiled files without having to download to a connected QuickPanel. You can then use the Download File button to send a compiled file (*.cmp) to one or more QuickPanels. You can add the current

project file to the compile file by clicking the Download Project button before clicking the Compile File button.

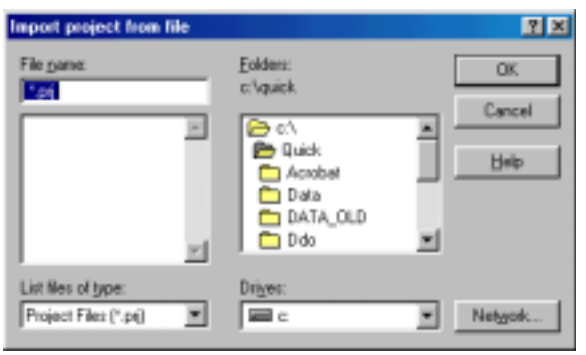
NOTE Long file names are supported, beginning with QuickDesigner version 3.50.

Project - Download from File

Selecting *Download from File* is the same as clicking the Download File button. The Download File button allows the user to select a compiled file (*.cmp) and send it to a QuickPanel. You do not have to compile a file prior to a download, if a compiled version of the project is available. The current download button will still support the standard compile and download operation.

Project - Import

This feature will allow importing project (*.prj) files. These files contain the entire project information, including target display type, PLC setup and all panels. Files can be imported from floppy disk.



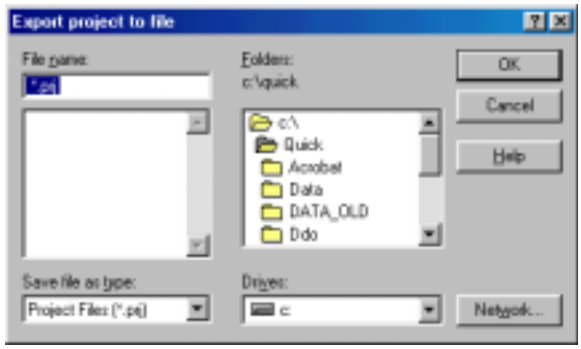
NOTE Long file names are supported, beginning with QuickDesigner version 3.50.

Project - Export

This feature will allow exporting project (*.prj) files. These files contain the entire project information, including target display type, PLC setup and all panels. Files can be exported to floppy disk.

CAUTION Do NOT export projects for use in early versions of QuickDesigner software. For example, exporting projects from 3.1 will NOT work in 2.3.

NOTE Long file names are supported, beginning with QuickDesigner version 3.50.

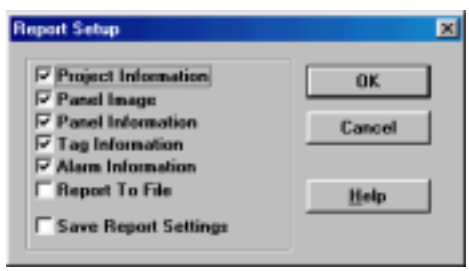


Project - Print

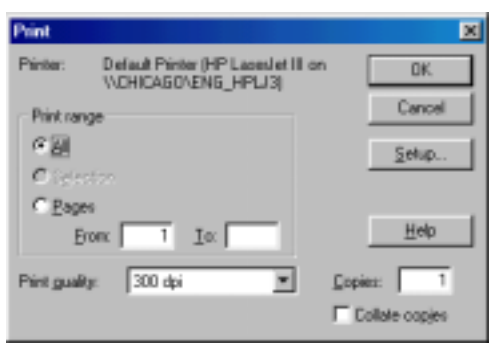
The print function allows printing summary information and panel images for all or part of a selected project. Selecting Print from the File menu or clicking the Print icon will display the following dialog box. Select the parts of the report you want printed by clicking the checkbox next to the item.

To save the report in RTF format, click the Report to File option. When you click OK, a Save Report dialog will open and you can enter the file name and select a destination path for the *.rtf file.

Check the 'Save Report Settings' option to save the checked selections. The next time you select the Project Print option, your custom selections will appear.



Click OK and a Print dialog box will appear. The dialog box will display the current Windows™ print driver for your system. Use the Setup button to configure your printer. See the printer information in Appendix B.



Project Information

A sample Project Information page is shown below.

PROJECT NAME
PROJECT INFORMATION

PROJECT: ABSLC500

Author: name
Created: date
Last Modified: date
notes:

TARGET DEVICE : QUICK PANEL jr. Color

Default Panel Name: name
Panel Trigger Tag: tag name
Screen Saver Timeout: 1.00 minute(s)
Save to FLASH ROM: No
Beeper: Enabled
Watchdog Tag: None
Watchdog Timeout: 1.00 second(s)
Communication Setting: RS422/485 Full duplex
Baud Rate: 9600
Data Bits: 8
Parity: None
Stop Bits: 1
Handshake: None

PROTOCOL: AB SLC 500

Source ID: 0
Destination ID: 1
Maximum ID: 31
Timeout(sec): 1.00

Panel Image

A bitmap image of the panel will be printed at the top of each panel information sheet.

Panel Information

The name of the panel, the panel ID and all panel objects are listed with their attributes. A sample is shown below.

PANEL: name

Panel ID: 1
Panel Size: 320 x 240
Grid Size: 80 x 40
Grid Display: Boxes
notes:

Push Button

Position	Size	Tag	Style	Action	Bez	Botl	Tch	Ltxt	Lbkr	Lotl	LFont	Legend Text
240,160	320,240	N7:100	Standard	Momentary	wht	blk	grn	yel	blu	wht	7x9	Motor
0,80	80,80	B3:20/7	Circular	Toggle	red	wht	wht	blu	grn	blk	11x16	Light

Pilot Light

Position	Size	Tag	Stxt	Slen	Sotl	SFont	State Text
240,160	320,240	N7:100	wht	blk	wht	7x9	REMOTE CONTROL
0,80	80,80	B3:20/7	blk	wht	wht	7x9	LOCAL CONTROL

Tag Information

All of the tags used for the project are sorted and printed by Tag Name. A sample is shown below.

Project name:

TAG INFORMATION

Tag Information Sorted by Tag Name

Name	I/O	Elements	Type	Size	Scale Range Low	Scale Range High
N7:100	N7:100	1	Integer	1	-32768.000000	32767.000000
B3:20/1	B3:20/1	1	Integer	1	0.000000	1.000000
~System_Second	~System_Second	1	Integer	1	0.000000	59.000000

Alarm Information

All of the information for the alarm configuration, queue setup and alarm file are included in the list. A sample alarm information page is shown below.

Project name:

ALARM INFORMATION

ALARM CONFIGURATION

Message Column: 16
Trigger Date Stamp Column: 1
Trigger Time Stamp Column: 10
Acknowledge Time Stamp Column: 37
Clear Time Stamp Column: 44
Date Format: MM/DD/YY
Time Format: 24 Hour
Assume Initial State: Same
Printer: None

Active Queue: On

Size: 10
Font: 7x9
Trigger Text - Text Color: blk, Background Color: wht
Acknowledge Text - Text Color: wht, Background Color: blk
Cleared Text - Text Color: wht, Background Color: blk

Historic Queue: On

Size: 10
Font: 7x9
Trigger Text - Text Color: blk, Background Color: wht
Acknowledge Text - Text Color: wht, Background Color: blk
Cleared Text - Text Color: wht, Background Color: blk

Logged Queue: On

Size: 10
Font: 7x9
Trigger Text - Text Color: blk, Background Color: wht
Acknowledge Text - Text Color: wht, Background Color: blk
Cleared Text - Text Color: wht, Background Color: blk

SYSTEM TAGS

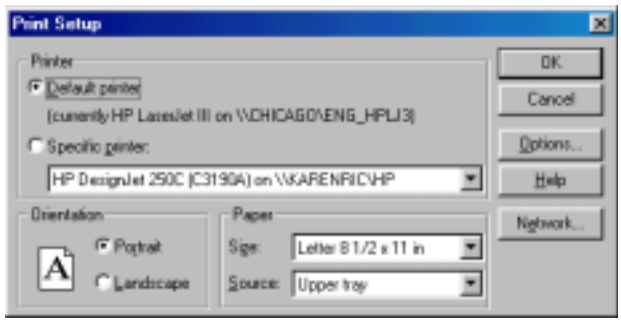
Individual Acknowledge: None
Global Acknowledge: N7:200
Individual Erase: None
Global Erase: None

Global Alarms

Address	Value	Message
IR0:B8	1	Bit 8 Alarm
IR0:B9	1	Bit 9 Alarm

Project - Print Setup

Displays the standard Print Setup dialog box for Windows™.



Project - Exit

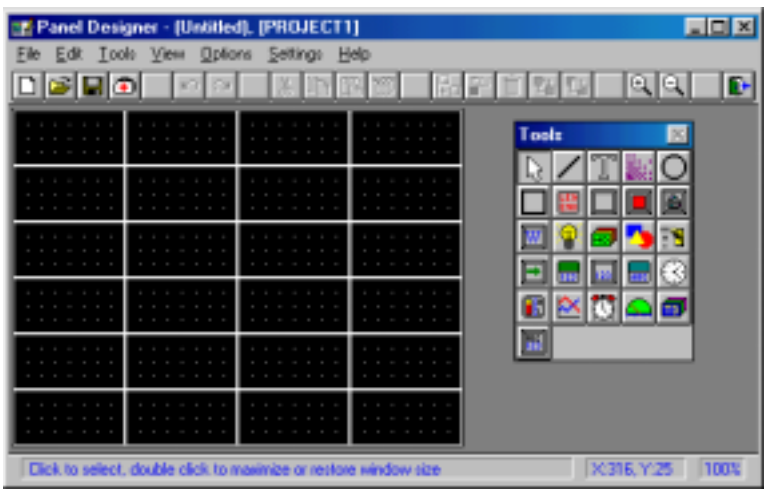
Closes the *QUICK MANAGER* window and returns to the Windows™ operating system Program Manager.

Components Menu

The Components menu contains the same selections as the large buttons in the *QUICK MANAGER* window. You can select Panels to create and edit project panels, select Tags to create and edit tag variables, or select Alarms to create alarm files.

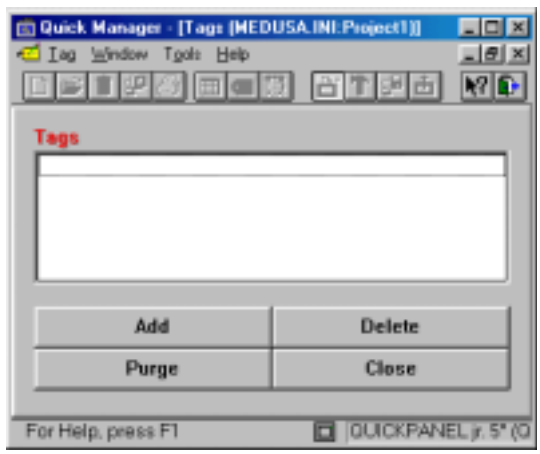
Panels

Selecting Panels will open the *QUICKDESIGNER* window. This window is used to create and edit project panels. This window and all the options are explained in the *QUICKDESIGNER* chapter on page 97.


Panel Designer - [Untitled], [PROJECT1]
File Edit Tools View Options Settings Help
Tools
Click to select, double click to maximize or restore window size
X:316, Y:25
100%

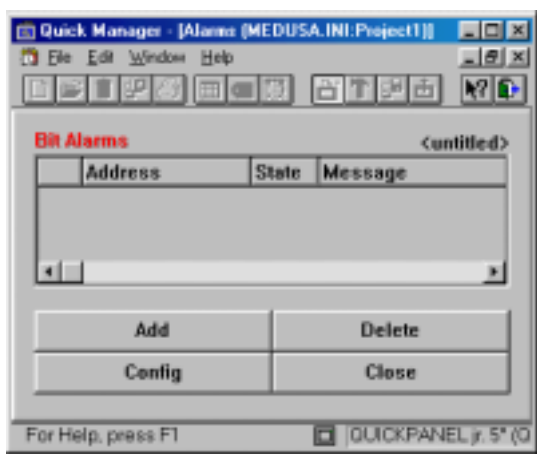
Tags

Selecting Tags will open the Tags window. This window is used to create and edit project tags. This window and all the options are explained in the Tags chapter on page 56.



Alarms

Selecting Alarms will open a dialog box to enter bit alarms or word alarms. Once the alarms are created, the main alarm window, shown below, is displayed. The Alarm window and all the options are explained in the *ALARMS* chapter on page 68. See also the Alarms Guided Tour on page 83 for an overview and guided tour of alarms.



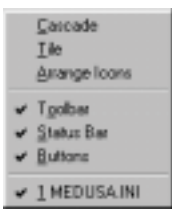
Options Menu

Preferences

Selecting Preferences will display the Project Options dialog box. When you double click on a project name, the default operation is to display the Project Setup dialog box. You can select a different operation in the Project Options dialog box.

Window Menu

Cascade, Tile and Arrange Icons are the standard window options for arranging your desktop. See the Appendix for information about using Windows™.



Toolbar

The Toolbar is normally displayed below the menu bar. Clicking one of the tools is the same as selecting the option from a menu. To remove the toolbar from the window, click the Toolbar option. When the check mark in front of the menu is removed, the toolbar will be removed.

Status Bar

The status bar is displayed at the bottom of the window. It gives you information about the selected menu option and displays the current project name. You can remove the Status Bar from the window by clicking the Status Bar option. When the check mark in front of the menu is removed, the status bar is removed.

Buttons

The large buttons shown in the *QUICK MANAGER* window can be removed to provide more room for project names. When the large buttons are removed, you will have to use the toolbar or menu selections to perform the desired operation. The New, Setup, and Download functions are found in the Project menu. The Panels, Tags, and Alarms functions are found in the Components menu. See Tool Bar for a description of the toolbar functions.

Active Window

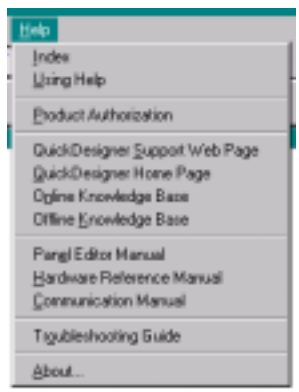
The bottom section of the Windows menu shows the current active window.

Help Menu

The on-line Help system gives you quick, easy-to-use information about the *QUICK MANAGER* and *QUICKDESIGNER* features. To request Help:

- Choose a Help category from the Help menu. Some categories take you directly to the information while others select the topic you want from a list of topics about the category you chose.
- Press F1 and choose an item from the main Help Index. You can also search for a topic using the Search command.
- Click the Help button you'll find in many dialog boxes.

Once you enter the help system from any point, you can gain access to any other help topic by clicking the *Quick Help* button at the top of the help screen.



Index

An alphabetical list of all Help topics that are available.

Using Help

Instructions on how to use Windows™ Help.

Product Authorization

The Product Authorization procedure requires that you authorize QuickDesigner for full use on your computer. Unauthorized versions can be used to create projects but they cannot be downloaded to a QuickPanel display. You can authorize the software via Phone/FAX or the Internet. The procedures are detailed in the Installation section of this manual. See Product Authorization on page 4.

Tech Support Web Page

Technical support home page on the Total Control Products web site. You must have a web browser installed to view these pages.

If the Users web browser is not IE or the path to the web browser is not correct the following error dialog will be shown.

Quick Manager
Failed to locate a web browser.You must have a web browser installed to view this help link.
Please modify the WebBrowser key in the QDHELP.INI file to point to your web browser.
The QDHELP.INI is located in C:\QUICK\
OK

QuickPanel Home Page

QuickPanel home page on the Total Control Products web site. You must have a web browser installed to view these pages. See the warning in Tech Support Web Page.

Online Knowledge Base

Online Knowledge Base page on the Total Control Products web site. You must have a web browser installed to view these pages. See the warning in Tech Support Web Page.

Knowledge Base

The Knowledge Base files may have been added to your system during installation. These files can be found in the default directory Quick/Qd_kb.

Panel Editor Manual

User manuals in PDF format may have been added to your system during installation. The Panel Editor manual contains all the information about Installation, Software Authorization, QuickManager, QuickDesigner, QuickCourier, Tags, Alarms, etc. When you click on this link, the manual is opened with Adobe Acrobat Reader.

Hardware Reference Manual

User manuals in PDF format may have been added to your system during installation. The Hardware Reference manual contains information about QuickPanels, cable diagrams, cutout diagrams, bezels, option modules, keypads, and maintenance procedures. When you click on this link, the manual is opened with Adobe Acrobat Reader.

Communication Manual

User manuals in PDF format may have been added to your system during installation. The Communications User Manual contains information about communication protocols including cable diagrams, setup information, and tag variable tables. When you click on this link, the manual is opened with Adobe Acrobat Reader.

Troubleshooting Guide

The troubleshooting guide provides a variety of topics that give suggestions and tips on troublshooting common issues. This guide covers both QuickDesigner related issues and QuickPanel runtime issues. A list of protocol related error codes is included in this guide.

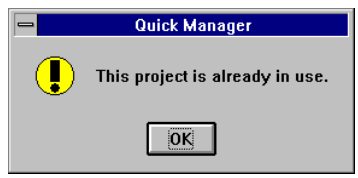
About

This menu selection will display the About information box which shows the software name, software revision level, software serial number and copyright information.

Error Message

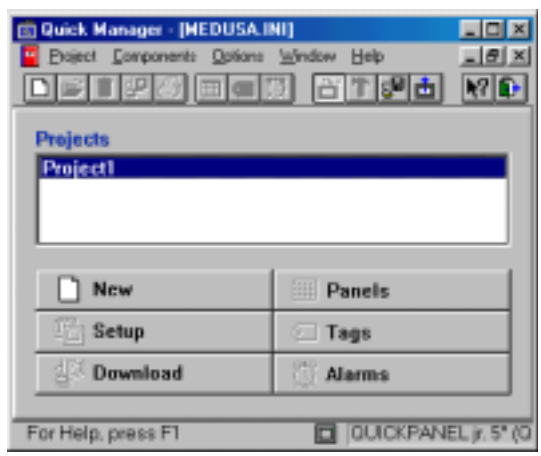
Project in Use

The following warning message appears when *QUICK MANAGER* believes another task or user is working with a project. You will get this message when you try to access one of your projects and all the buttons are greyed out. The message indicates the database is locked.



The *QUICK MANAGER* window appears similar to the one below, with many of the icons and option buttons greyed out.

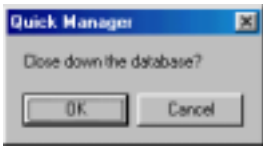
Note that the project database, named MEDUSA.INI, has been maximized in the *QUICK MANAGER* window. This can be confirmed by the presence of the control buttons located to the right of the word "Help."



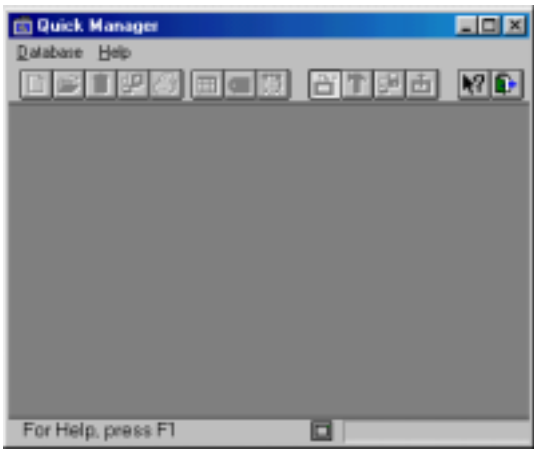
The first step in unlocking the database is to close the database. Make sure no other tasks or users are using the database. Click the control icon located to the left of the word "Project" to display the control menu.

NOTE: If there is no control icon next to the word "Project", your project window has been minimized. Click the maximize button to restore it.

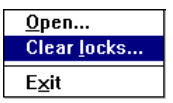
Select Close from the control menu and the following dialog box will appear.



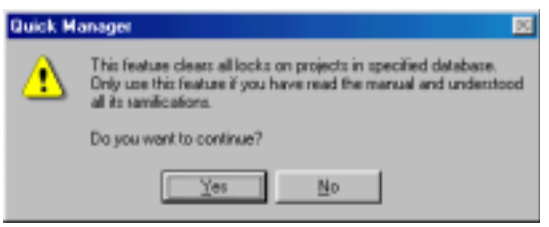
Click OK to close the project database. The *QUICK MANAGER* window appears similar to the one below.



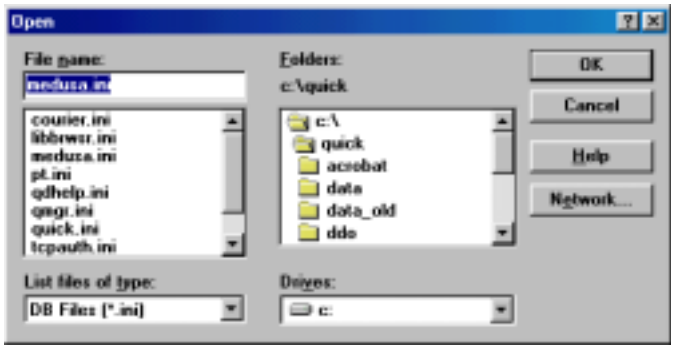
Click on the Database menu option and select Clear Locks.



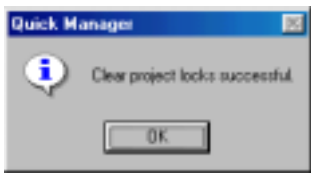
The following prompt is displayed.


Quick Manager
This feature clears all locks on projects in specified database.
Only use this feature if you have read the manual and understood all its ramifications.
Do you want to continue?
Yes
No

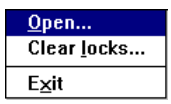
Click Yes to clear all locks on projects in the database. The Open dialog box is displayed.



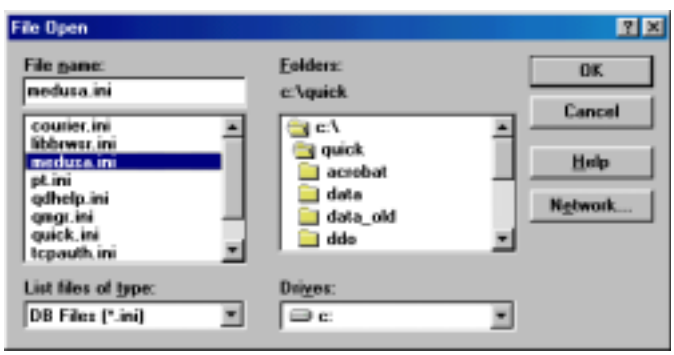
Make sure "medusa.ini" is selected then click OK. When the locks are cleared, the following prompt is displayed.



Click OK to remove the prompt. Select Open from the Database menu.



The File Open menu is displayed.



Select "medusa.ini" and click OK. When you select a project, the buttons will again be active.

Tags

Introduction to Tags

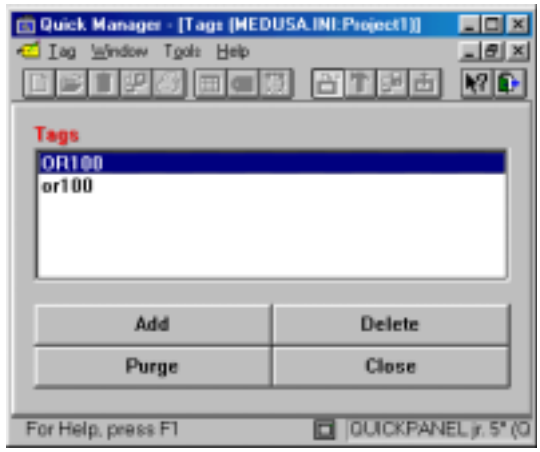
Tags are the names of control elements in your host device, either words or bits. For example, if you have a pilot light, there must be a control element in your PLC that is used to turn the pilot light ON and OFF. Since a pilot light has only two states, you can assume the control element is a bit. Bits have specific names, such as B3:100 or IR2:B2. In this manual, the name of the control element is called a tag. Therefore, every panel operator that is active requires a tag. The tag *MUST* be a legal tag name for the selected PLC type. These tags are external to the display, which means the display will have to read the tag information from the PLC. You can create internal tags, which are variables that are controlled and contained within the display. There are internal tags with specific names, such as the internal clock with the tag name ~System_Clock. Internal tags are explained in the next chapter on page 66.

Selecting Tags

To select Tags, click the Tag icon or select Tags from the Components menu. The tag icon is found in the tool bar and on the Tags button.

Selecting Tags will open the Tags window. This window allows adding new tags, viewing tag attributes and deleting tags. Tags are the names of PLC variables and special internal variables. Each PLC supported by *QUICKDESIGNER* has a dedicated chapter in the Communications manual.

NOTE Tag names are case sensitive. OR100 and or100 read the same data from the PLC but each is a separate and distinct variable in the QUICKPANEL.



Tag Buttons

Some of the selections in the Tag menu have been duplicated in large buttons. You can use the large buttons or select the option from the Tag menu.

Add Tag

You can create a new tag by selecting Add from the Tag menu or clicking the ADD button. Enter the tag name in the New Address data entry box. Tag names are tested to insure they are valid for the PLC you selected. Tags that do not fit the format specified for a particular PLC type can be designated as internal tags, which are described in the Internal Tags section.

You can create a contiguous group of tags that have a common name by entering the number of tags in the Count field. In the following example, the Count has been set to 5. The following tags will be created:
DM200
DM201
DM202
DM203
DM204

Delete Tag

You can delete a tag by first clicking the tag to highlight it, then selecting Delete from the Tag menu or clicking the Delete button.

UnDelete

You can UnDelete a previously deleted tag by selecting UnDelete from the Tag menu.

Purge

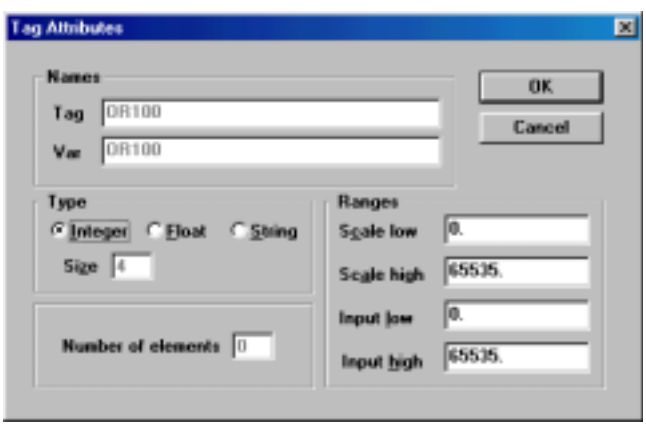
To purge ***ALL*** tags from the project list, click the Purge button or select Purge from the Tag menu. Use caution with this button since the operation will remove all tags.

NOTE Purging ALL tags from a project will remove all tags!

Tag Attributes

Tags can have attributes, such as type and range. Assigning attributes to a tag allows you to customize the tag to a particular application. For example, you can scale a tag so that when the data is displayed, a scaled range is displayed.

You can view the attributes of a tag by selecting Attributes from the Tag menu or by double-clicking the tag name. The three sections of the tag attributes menu are Names, Type and Ranges.



Tag Attributes-Names

This section of the Tag Attributes dialog box shows the name of the Tag. The Var name is for internal use and cannot be changed.

Tag Attributes-Type

This section of the Tag Attributes dialog box indicates the type setting and other attributes of the tag variable. The default setting for tags is Integer.

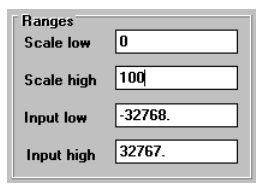
Set the type to **Float** when reading Floating Point variables. Set the type to **String** when reading ASCII characters. The Text Display object will display text characters only when the tag type is set to String. Selecting the String type will activate the **Size** entry box. The Size is used to select the number of words to be read from the PLC. For example, if the starting address is DM100 and the length is 5, then the last address read will be DM104.

If the tag variable type in your PLC is not a string type, you may get only one character for each register location. PLC's that support string types will generate two characters for each register location.

A data file is automatically created when you create a Block Transfer file for Allen-Bradley Remote I/O applications. The **Number of Elements** in the data file is the same as the number of words selected for the Block Transfer.

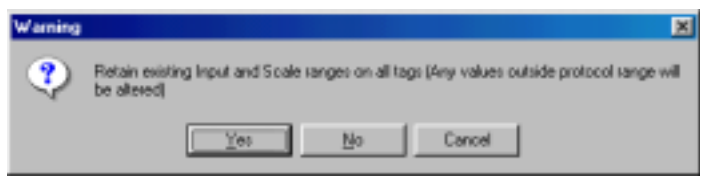
Tag Attributes-Ranges

This section of the Tag Attributes dialog box indicates the ranges of the variable. The ranges are automatically set for each tag type. By changing the scale ranges, you change the ratio of the input value to the displayed value. In the following example, if you changed the Scale low to 0 and the Scale high to 100, when the Input value is -32768 the displayed value would be 0, and when the Input value is 32767, the displayed value would be 100.

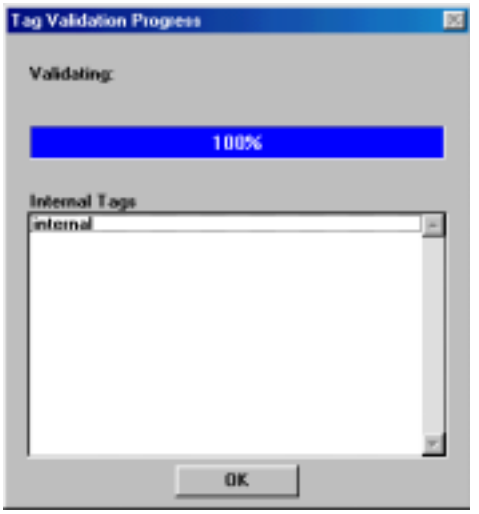


Validate Tags

You can validate the entire tag list by selecting Validate Tags from the Tools menu. The following warning is displayed.


Warning
Retain existing Input and Scale ranges on all tags (Any values outside protocol range will be altered)
Yes
No
Cancel

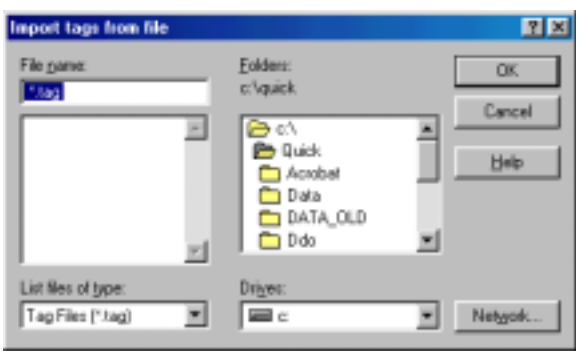
The tag validation process is displayed in the Tag Validation Progress dialog box.



Tag Import

You can import (or update) a tag database from a comma-separated variable file (*.tag, *.tcs), Versa Pro/Logic Master generated *.snf files, and text files of any extension.

NOTE Long file names are supported, beginning with QuickDesigner version 3.50.



The import is possible in several comma-separated variable (*.csv, *.tcs) line formats. More than one line format can be used in a file. The line formats are:

Line Format 1:

Tag Name

Example:

%RI200

Line Format 2:

TagName, Scale Low, Scale Hi, Input Low, Input High

Example:

%RI200, -200, -300, 0, 4095

Line Format 3:

Tag Name, Var Name, TadID, TagType, Tag Modifier, Tag Period, Scale Low, Scale High, Input Low, Input High, Disk logging state, Internal Var Flag, ~EOR, 0

Parameter	Possible Value 1	Possible Value 2	Possible Value 3	Possible Value 4
Tag Type	“Integer”	“Float”	“Text[n]”	“ “
Tag Modifier	“Array[n]”	“Buffer[n]”	“ “	“ “
Disk Logging State	0	1		
Internal Var Flag	0	1		

Example:

%RI100, %RI100, 0, Integer, , 0.00, -32768.00, 32767.00, -32768.00, 32767.00, 0, 0, ~EOR, 0

Line Format 4:

Tag Name, Var Name, TagType, Scale Low, Scale High, Input Low, Input High, Internal Var Flag

Parameter	Possible Value 1	Possible Value 2	Possible Value 3	Possible Value 4
Tag Type	“Integer”	“Float”	“Text[n]”	“ “
Internal Var Flag	0	1		

Example:

%RI100, %RI100, Integer, -32768.00, 32767.00, -32768.00, 32767.00, 0

Example file:

Comment lines begin with ‘#’ character

```
# This is an example file
%RI200,
%RI201,
%RI202, 100, 200, 300, 400,
%RI203,
# These tags used for temperature
%RI1001, %RI1001, 0, Integer, , 0.00, -32768.00, 32767.00, -32768.00, 32767.00, 0, 0, ~EOR, 0
%RI1002, %RI1002, 0, Integer, , 0.00, -32768.00, 32767.00, -32768.00, 32767.00, 0, 0, ~EOR, 0
%RI1003, %RI1003, 0, Integer, , 0.00, -32768.00, 32767.00, -32768.00, 32767.00, 0, 0, ~EOR, 0
# These tags used for pressure
%RI2001, %RI1001, 0, Integer, , 0.00, -32768.00, 32767.00, -32768.00, 32767.00, 0, 0, ~EOR, 0
%RI2002, %RI1002, 0, Integer, , 0.00, -32768.00, 32767.00, -32768.00, 32767.00, 0, 0, ~EOR, 0
%RI2003, %RI1003, 0, Integer, , 0.00, -32768.00, 32767.00, -32768.00, 32767.00, 0, 0, ~EOR, 0
```

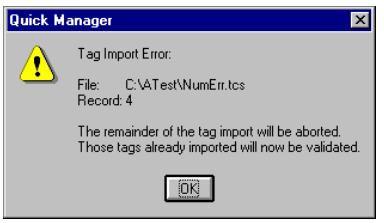
Line Errors

There are certain illegal states possible when importing tags. They are:

- Invalid number of fields (must be 1, 5 or 14)
- Invalid field (text where number should be)

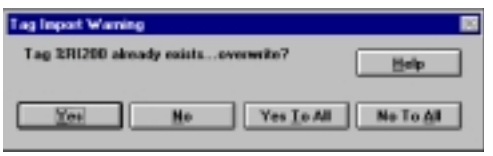
• Empty field (empty field for number is considered to be zero. Empty field for tag or var name is considered to be an error)

If there is an error reported during tag import, you will see the following error:



The tag import process will then end. Please note that you will still be led through the tag validation process, because if the import detects an error halfway through importing 100 tags, the first 50 will already have been created and must be validated.

If you attempt to import a tag that already exists in the tag database but differs in its configuration, you will be presented with the following options:



Considerations:

If a tag exists multiple times in the import file, only the last instance of the tag will appear.

Tag Validation

Once the import is complete, the tag validation process will occur. This will ensure that all the tags you imported have the correct configuration.

Following the Tag Validation, a report will be generated that gives the following information:

• Invalid Tag Types
• Invalid attempts to use arrays

These warnings will result in an error log being generated (c:\QDTagImp.txt). An example of the log file is shown below:

```
• Address (%M00401) is not supported as type (UNSIGNED) for this device.  Tag
(RSBIT_1) could not be created

• Tag (BPTCRD) has length (25).  Arrays are not supported.  Creating first element
only
```

Versa Pro Tag Import

The following rules (which differ from the normal *.tcs text import) will apply when importing an SNF file:

- Files must have the SNF extension
- Comment lines begin with "##". Since normal text files use a single '#', there is no conflict
- Header section will be ignored
- Any line beginning with a "::" double colon sequence is considered a continuation of the records started on the previous line
- Records continued over several lines may not have intervening comment lines
- Fields that contain commas must be enclosed within quotes (")
- To include leading or trailing spaces for a field, enclose the field within quotes: otherwise leading or trailing spaces for a field are ignored.

Field Names Section Rules

- May contain only one record
- The first non-comment line in the file.
- PT_ID must be the first field
- No empty fields are permitted
- The following items will be considered valid:

  PT_ID
  ADDR
  PT_TYPE (BOOL, BYTE, WORD)
  LENGTH (Size)

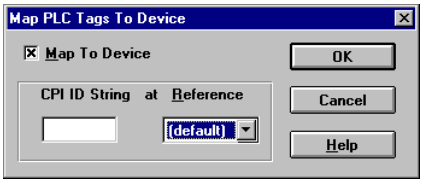
- Any non-supported fields will be silently ignored during import time

Data Section Rules

- Must follow the Field Names Section
- The first non-comment line after the Field Names Section.
- PT_IDs and ADDR fields will be converted to uppercase
- Empty fields must be delimited by commas

Tag Mapping

When you import tags, a standard File selection dialog will appear giving three options: (*.tcs, *.snf, *.tag). When you import from an SNF file, you will be prompted to map the PLC tag to a device. This can be useful because each SNF file represents the tags for a single device. The result of checking the Map To Device checkbox and selecting a reference, is that the Device reference ("_A", "_B", etc) will be appended to the end of each tag.



This allows you to choose whether to map all the addresses in the file to a given CPU reference.

This feature will only be available for the following drivers:

GeSnp
GeSnpx
Ge Genius

If the mapping to a CPU reference causes a conflict with an existing tag (already exists but mapped to a different reference), you will be warned on a per-tag basis and will be allowed the standard overwrite options(yes, no, yes to all, no to all). If you elect not to overwrite a tag, then a new tag (mapped to the appropriate reference) will be created.

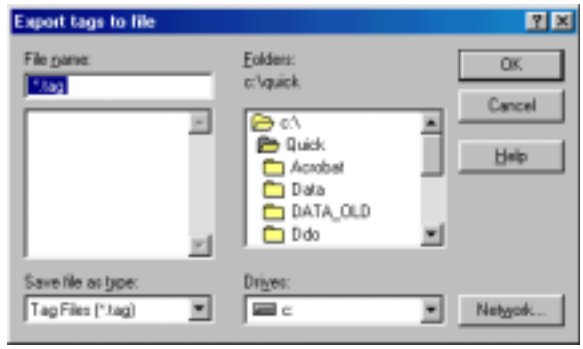
Example file (SNF)

```
##
##  This is a Shared Name File (SNF) used to pass
##  Tag Names (mnemonic references to Series 90-70
##  PLC reference table locations) among various
##  applications such as PROCESS 90, Logicmaster,
##  and CIMPLICITY.
##
##&&Creator,PROCESS_90
##&&CreateDate,1-JUN-1994
##&&ProgDate,31-MAY-1994
##&&FileType,I/O
##
PT_ID,ADDRESS,DESCRIPTION,PT_TYPE,IN_OUT,ENG_UNITS
##
BSO_PB,%I1,Boiler shutoff pushbutton,BOOL,IN,,
OVTEMP,%Q1,Boiler overtemp warning,
::BOOL,OUT,,
STEMP,%R1,Scaled boiler temperature,REAL,IN,DEG_C
```

Tag Export

Save the tag information in a file using the *.tag or *.tcs format.

NOTE Long file names are supported, beginning with QuickDesigner version 3.50.



Close

Close the tag window and return to the *QUICK MANAGER*.

Internal Tags

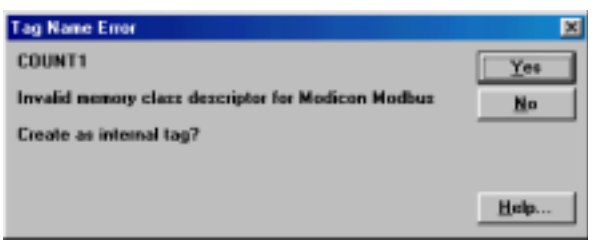
Introduction to Internal Tags

Review of Tags

Tags are the names of control elements in your host device, either words or bits. Every panel operator that is active requires a tag. The tag is usually a legal tag name for the selected PLC type. These tags are external to the display, which means the display will have to read the tag information from the PLC. You can create internal tags, which are variables that are controlled and contained within the display. There are internal tags with specific names, such as the internal clock with the tag name ~System_Clock.

Internal Tags

In certain projects, you may want to have an internal storage register, to store some values or act as a temporary counter. You can create an internal tag by entering a tag name that is not valid for the assigned PLC. For example, if you entered the name COUNT1 as a tag name, the tag editor would display the following prompt.



Click the Yes button to create the internal tag. You can read and write the internal tag in the same manner as external PLC tags.

System Tags

The target display has several support functions designed into the hardware, such as the clock. One of the tools available to the panel designer is a Clock operator. The method used to connect the Clock operator to the hardware clock is a series of internal tags called SYSTEM tags. The Clock operator is connected to three SYSTEM tags, which supply the data for seconds, minutes and hours. The tags are called ~System_Second, ~System_Minute, and ~System_Hour respectively. Note the names of the tags that are designated SYSTEM tags all begin with a tilde (~) and the word "System." Note also that there is an underscore symbol between the word "System" and the name of the tag.

In order to use a SYSTEM tag, you must always specify the name of the tag exactly as it appears in this reference section. To display system seconds, you can select a Numeric Data Display operator and

specify the tag name as ~System_Second. You may get an error message indicating that the tag name is not valid for a particular PLC type, but that is normal, since you can create internal tags using any name. However, to use the SYSTEM tags, the name must be entered exactly. If you entered the tag name as "Second", the target display will create an internal variable called "Second", but it will not be connected to the internal clock.

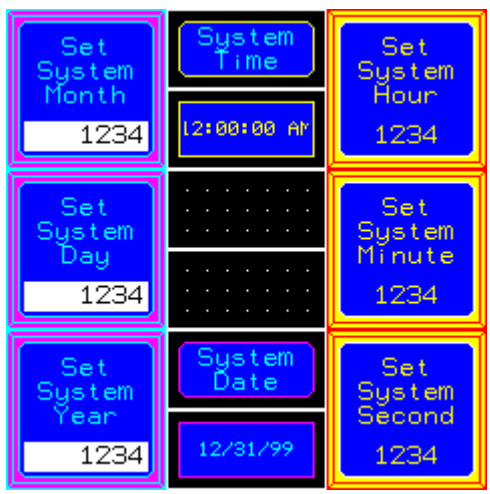
System Variables

This section contains the list of current supported system variables.

~System_Second	Internal clock seconds
~System_Minute	Internal clock minutes
~System_Hour	Internal clock hours
~System_Day	Internal clock day
~System_Month	Internal clock month
~System_Year	Internal clock year
~System_Contrast	LCD panel contrast setting

Setting the target display time and date

To set the time on a display, use the Numeric Data Entry tool to set the internal variables Hour, Minutes, and Seconds. To set the date, use the Numeric Data Entry tool to set the internal variables Month, Day, and Year. (Do not use any other tool to modify the internal variables.) The following panel shows how to design a panel for setting the display time and date. The panel consists of Numeric Data Entry tools for reading and modifying system variables, and Numeric Data Display tools for displaying the system time and date.



For System Hour, set the Numeric Data Entry tag name to **~System_Hour**. You must type the tag name exactly as shown, including the tilde at the beginning. Remember to enter the desired text in the legend plate to identify the Numeric Data Entry tool as system hour. Set the Input Range Min and Max values (1 to 12 for 12 hour display or 0 to 23 for Military display).

For System Minute, set the tag name to **~System_Minute** and for System Second, set the tag variable to **~System_Second**. Remember to enter the desired text in the legend plates to identify system minute and system second. Also remember to set the Input Range Min and Max values for minutes and seconds.

For System Month, set the tag name to **~System_Month**, for System Day set the tag variable to **~System_Day**, and for System Year, set the tag variable to **~System_Year**.

Save the panel and download it to the target display. Use the data entry operators to set the Time and Date for your display. The target display maintains the system time and date between power cycles.

Contrast System Variable

The contrast of the target display can be changed to suit different viewing conditions. The contrast can be adjusted offline or online.

To adjust the contrast online, the system variable ~System_Contrast must be set to a value from 1 to 7. This can easily be done by using two Word Buttons: one to increment and one to decrement the value of ~System_Contrast. You can see the contrast change as the value is increased or decreased.

Select the Word Button operator and place it on the panel. When the Word Button Settings dialog box appears, enter the tag name as **~System_Contrast**. You must type the tag name exactly as shown, including the tilde (~) at the beginning. Select the Action as Add and set the value to 1. Remember to enter the desired text in the legend plate to identify the operator. Place a second Word Button on the panel with the same tag name and select the Action as Subtract and the value as 1.

You can adjust the screen contrast offline by simultaneously touching the top left and top right corners of the QuickPanel touch screen. This will bring up a contrast bar on the bottom of the screen. The contrast bar is divided into different shaded sections. Pressing a lighter section will lighten the screen, pressing a darker section will darken the screen. If you press the black section, the screen will go black. To accept the screen contrast change, touch the screen anywhere outside the shaded sections.

Be careful when using this adjustment. A blank screen could indicate a serious malfunction of the display or an accidental contrast change to black.

Alarms

Introduction to Alarms

Alarms are messages that appear on the display in response to a specific condition in the host control system. The alarm message informs the operator of a condition that requires immediate attention. A typical alarm message is shown below.

```
DATE  TIME  MESSAGE                    ACK   CLEAR
09/18 22:48 HIGH TEMPERATURE ALARM
```

There are two procedures involved in creating an alarm display. The first procedure is to configure the alarm manager. You create a table of PLC address bits or words and enter the alarm text for each table entry. The alarm manager reads data from the host and determines if an alarm condition exists.

You select the format for the alarm message, date stamp and time stamp. You can change the size and format of the queues (buffer area) where the alarm messages are stored. When alarm messages exceed the size of the queue, the oldest alarm messages are deleted. You can select a bit or group of bits in your PLC that will be set when the alarm Acknowledge and Delete buttons are used. The alarm table and configuration information are saved in an alarm file.

For each alarm condition, the alarm manager creates an alarm message string. The alarm manager adds date and time stamps, add the alarm text from the alarm table, formats the entire alarm message, and stores the alarm message in the Active Alarm queue (buffer area). The alarm manager keeps track of when the alarm was acknowledged and cleared and stores this information in the Historic queue. The alarm manager also tracks every alarm activity in a Logged Alarm queue.

Creating an alarm window is the second procedure required to view alarms. The alarm window is a tool, similar to other tools, like pilot lights and push buttons. The alarm window is placed on a panel and is used to view alarm information from a selected alarm buffer. If the operator touches the alarm window, the alarm manager screen is displayed. This screen allows the operator to acknowledge one or all alarms, clear one or all alarms, or view any alarm message stored in the alarm buffer.

This chapter is designed as a reference section. Before attempting to configure alarms, you should follow the procedures in the Alarms Guided Tour on page 83.

This chapter will describe how to:

- Open the Alarms window
- Add a new word or bit alarm file.
- Assign words or bits in your host device as alarm elements.
- Setup the alarm message format.
- Configure the alarm manager so the Acknowledge and Del buttons set bits in the host.
- Connect a serial printer for printing alarm messages.

Bit and Word Address Tags

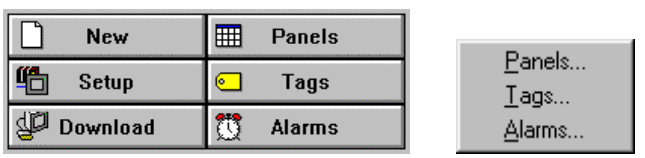
The alarm manager is the control center for alarm operations. The alarm manager must read the PLC address you have assigned as the alarm bit or word. The read operation will cycle very quickly if you have only one bit or word to read. If you try to read alarm bits that are scattered throughout the PLC memory, the response time will tend to become slow. The best method of reading alarm bits or words is to read consecutive PLC bits and words.

When you first add an alarm table, you select a starting address and then enter the number of consecutive bits or words. The alarm table is built automatically. This is the fastest and most efficient way of reading alarm data from the PLC. When you are done creating the alarm address table and entering the alarm messages, the alarm table is saved to an alarm file. There are several examples of the alarm table in this section.

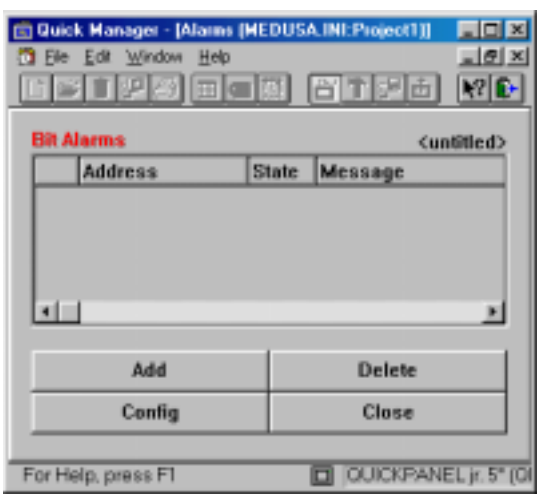
If for some reason you are unable to create a consecutive alarm table, you can still enter a single alarm address by setting the number of bits or words to 1. You can also set the number of bits or words to the maximum size of the alarm table, and let the alarm manager build the alarm table. Go to the Edit menu and click the Free Form Address option, which will allow you to edit any address in the table. You must be careful to enter only valid PLC addresses. Entering a name like JOE will create an invalid address. The alarm file is sent to the target display during the download operation.

Alarms Configuration

To configure Alarms, click the Alarms button or select Alarms from the Components menu.



Selecting Alarms will open the *Alarms* window and the *New bit alarms* dialog. (See *New bit alarms* in the Edit Menu section). The Alarms window is used to create and edit alarm files and configure the alarm message and buffers. The *Alarms* window appears below.



The default setting for the window is Bit Alarms. Bit alarms are controlled by a bit going ON or OFF. You can create a word alarm file by selecting **New-Word** from the **File** menu. Word alarms are based on the value of the word.

The large buttons at the bottom of the window are convenience buttons, which allow rapid access to menu selections. The Config and Close buttons are File menu options, while the Add and Delete buttons are Edit menu options.

NOTE See the Alarms Guided Tour on page 83 for an overview and guided tour.

File menu

The file menu option is used to create new word or bit alarm files, to open existing alarm files, to save new or edited files, to delete unwanted files, to configure alarm files or to close the alarms manager window.

File Menu Buttons

The Config and Close buttons shown in the Alarms window perform the same function as the Config and Close options in the File menu. The Config button will open the Configuration dialog and the Close button will close the alarm window.

You can display the Configuration dialog box by selecting Configuration from the File menu or by clicking the **Config** button. You can close the alarm window by selecting Close from the File menu or by clicking the **Close** button.

Create an alarm file based on a bit or a word in the PLC. Bit alarms are controlled by a bit going ON or OFF, while word alarms are based on the value of the word.

File - Open

Open an existing alarm file. The *Open Alarm File* dialog box appears. Select a file name from the list or type in the file name.

File - Save

Saves the current alarm file with all the option settings. You must have an alarm file saved for alarms to work. The *Save Alarm File As* dialog box appears. Enter a new file name or select an existing file name to overwrite.

NOTE Long file names are supported, beginning with QuickDesigner version 3.50.

File - Save As

Saves the current alarm file using the specified file name. The *Save Alarm File As* dialog box appears.

NOTE Long file names are supported, beginning with QuickDesigner version 3.50.

File - Delete

Delete an existing alarm file. The *Delete Alarm File* dialog is displayed. Select the filename from the list or type in the filename. Once you delete the file, it is gone.

File - Import

Import an existing alarm file. After the file is imported, Open the file to view the alarm table.

NOTE Long file names are supported, beginning with QuickDesigner version 3.50.

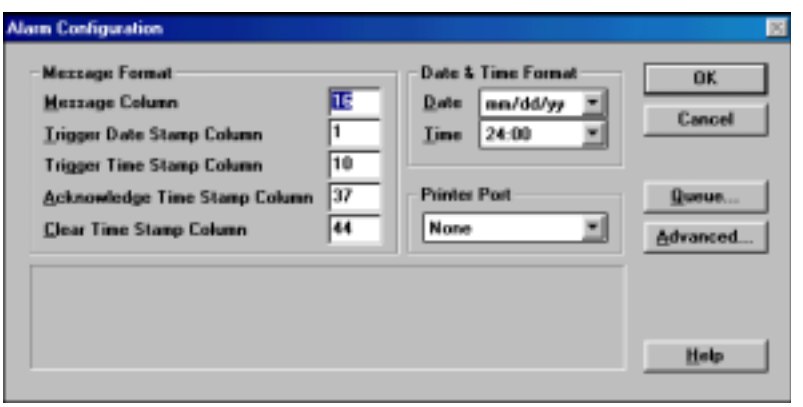
File - Export

Export the current alarm file using the *.alm file extension.

NOTE When using the export file feature, ALL alarm files are included in the export file.

File - Configuration

Displays the *Alarm Configuration* dialog box. See Config Button on page 77.



File - Close

Close the current alarm file. If the alarm table is new or changes were made to the table, a prompt will appear reminding you to save the file. You MUST have an alarm file saved for alarms to work.

Edit Menu

You can create an alarm table or add new alarms by selecting **Add** from the **Edit** menu or by clicking the **Add** button. You can delete elements from the alarm table by selecting **Delete** from the **Edit** menu or by clicking the **Delete** button. Use Cut, Copy and Paste to edit alarm text. Select a bit alarm address and the Bit option will toggle the State setting. **Free Form Addressing** allows editing the alarm address.

Edit Buttons

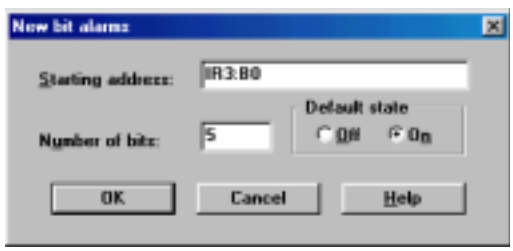
The **Add** and **Delete** buttons shown in the Alarms window perform the same function as the Add and Delete options in the Edit menu.

Edit - Add

Adds bit or word address tags. Allows single or multiple tag creation in contiguous blocks. Used to create the alarm address table and alarm messages.

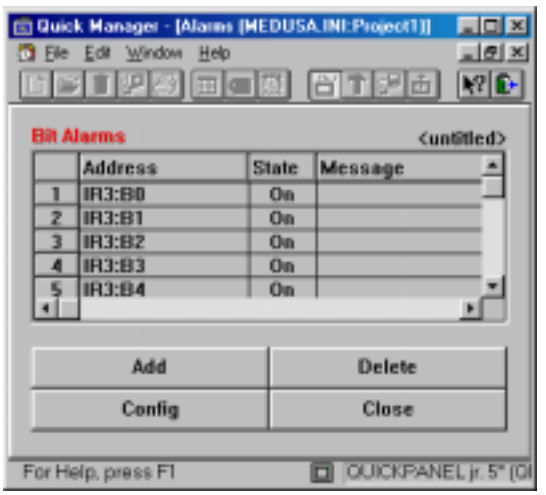
Adding Bit Alarms

When adding bit alarms, enter the starting address and the number of bits. The alarm processor will automatically create a contiguous string of addresses, starting at the specified address.



NOTE It is more efficient to create alarms in a contiguous order. When alarms are scattered through different areas of memory, the response time of the QuickPanel gets slower.

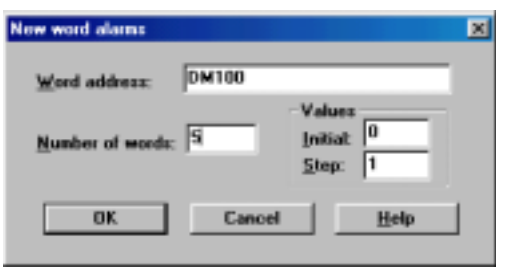
For example, if you enter IR3:B0 as the starting address and the number of bits as 5, the alarm processor will create the following alarm table. The first entry is IR3:B0 with the State set to ON. That means when IR3:B0 goes to a 1 (ON), an alarm will be generated. You can change the State condition by double clicking the State field to change the ON to OFF.



Adding Word Alarms

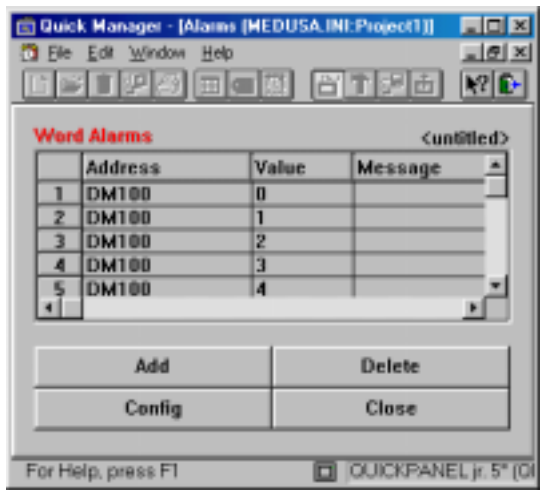
When adding word alarms, enter the word address and the number of words. The alarm processor will automatically create the alarm table, using the specified word address. Each table entry will show the word address with a different value, based on the initial and step settings. The number of table entries is based on the number of words selected.

Values: *Initial* is the value given to the first word alarm in the file. The default is 0. *Step* is the number added to the initial value and each succedding table entry. The default is 1.



NOTE It is more efficient to create alarms in a contiguous order. When alarms are scattered through different areas of memory, the response time of the QuickPanel gets slower.

For example, if you enter DM100 as the starting address and the number of words as 5, the alarm processor will create the following alarm table. (Initial = 0, Step = 1)



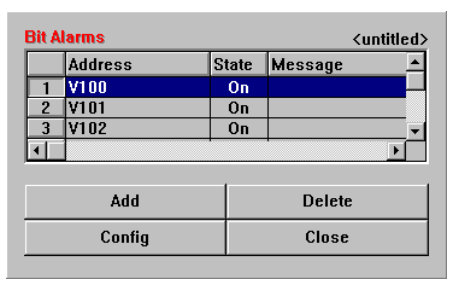
The first entry in the above table is DM100 with a value of 0. That means when DM100 is equal to 0, an alarm condition exists. Registers in a PLC are often reset to 0 during power cycles. You may not want a value of 0 to produce an error condition. To prevent this situation, change the Initial setting in the New Alarms dialog box to 1.

Maximum Alarms in a Project

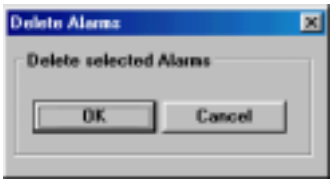
The maximum number of alarms for a project depends on the display model. For QPJ models, the maximum is 512 alarms, consisting of two files of 256 alarms. For QPI models, the maximum is 768 alarms, consisting of three files of 256 alarms. When you first create an alarm, the first file of 256 is allocated. When you exceed 256, the next file is opened.

Edit - Delete

To delete an alarm, first select the alarm or multiple alarms by clicking the number buttons next to the alarm. In the following picture, alarm 1 has been selected.



Next, click the Delete button or select Delete from the Edit menu, which will display the Delete Alarms dialog box.



Click OK to delete the selected alarms.

Entering and Editing Alarm Messages

The alarm table is created without any alarm messages. You must enter an alarm message for each entry in the alarm table. To enter text in the Message field, move the mouse pointer to the field and click. The field is selected and you can begin to type the alarm message. See the Message Format description on page 77 to determine the practical limit to the number of characters in the message.

NOTE The maximum number of characters for the alarm message is 80.

You can enter text in a blank message field by clicking on the field and typing. While typing, you are in the text edit mode. You can use DEL, BACKSPACE, and cursor keys to edit the text. If you double click a message field that has text in it, or select a field and press F2, you will be in the text edit mode. Use ESC to undo typing errors.

Edit - Cut Message

To cut all or part of a message, double-click the message field, select the part of the text to cut and use CTRL+X or select CUT from the Edit menu.

Edit - Copy Message

To copy all or part of a message, double-click the message field, select the part of the text to copy and use CTRL+C or select COPY from the Edit menu.

Edit - Paste Message

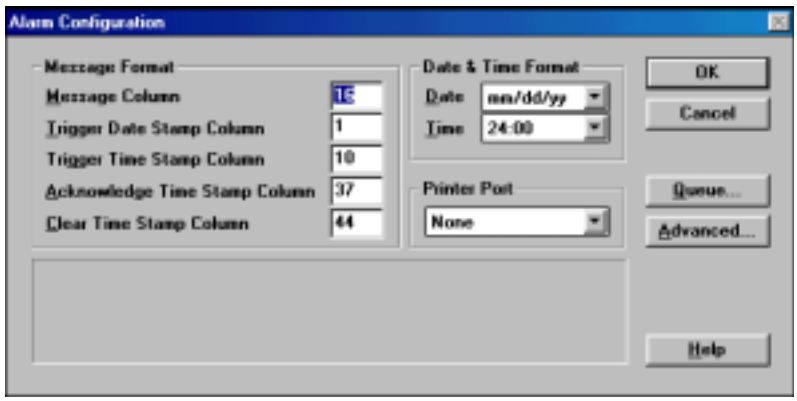
Messages copied or cut can be pasted to other alarm text message fields. Double-click the message field, move the cursor to the starting point and use CTRL+V or select PASTE from the Edit menu.

Edit - Free Form Addressing

When checked, free form addressing allows you to edit the address field of the alarm table. Make sure you enter a valid PLC address. When unchecked, you cannot edit the address field.

Config Button

Selects the Alarm Configuration dialog box.



Message Format

The alarm text that appears in an Alarm Window will have the alarm message plus other options such as a date stamp and a time stamp. The Message Format section is used to assign a starting column number to each part of the total alarm message. The maximum number of characters that can be displayed is dependent on the type of target display and the size of the text. The maximum number of characters that can be displayed is also dependent on how many options are selected, such as the time stamp. In any case, the maximum number of characters for just the alarm message is 80. Obviously, if you are using a QuickPanel Jr., which can only display a maximum of 49 characters, then you must design the layout for smaller alarm messages.

The following chart shows the MAXIMUM number of text characters that can appear in an Alarm Window.

Display Model	5x7 Characters	7x9 Characters	11x16 Characters	16x32 Characters
QUICKPANEL (QPK,QPJ,QPH)	49	37	23	18
QUICKPANEL (QPI)	103	77	47	38
QUICKPANEL (QPL)	124	95	57	46

Use a columnar tablet to help you design the alarm message panel. The column count begins at column 1. Remember to put a space between text elements for easier viewing. The date format can be 8 characters (mm/dd/yy) or 5 characters (mm/dd). The time stamp is 5 characters (12:00).

In the following example, the display type is a *QUICKPANEL jr.*, which has a maximum 49 character Alarm Window. The Date Format has been set to mm/dd (month/day). In this example, the format allows for 25 characters in the message text (column 13 to column 37 = 25 characters).

Message Column:	13	(Start of Alarm Message)
Trigger Date Stamp Column:	1	(Enter a 0 if you do NOT want a Trigger Date stamp)
Trigger Time Stamp Column:	7	(Enter a 0 if you do NOT want a Trigger Time stamp)
Acknowledge Time Stamp Column:	38	(Enter a 0 if you do NOT want a Acknowledge Time stamp)
Clear Time Stamp Column:	44	(Enter a 0 if you do NOT want a Clear Time stamp)

```
DATE  TIME  MESSAGE                    ACK   CLEAR
09/18 22:48 ALARM MESSAGE TEXT         22:50 22:52
```

COL 1 COL 7 COL 13 COL 38 COL 44

Date Format

The date format can be mm/dd/yy or mm/dd format. Each character in the date stamp requires a space in the alarm message. Therefore, mm/dd/yy will take 8 spaces, plus an additional space for separation between columns. The mm/dd format requires only 5 spaces, plus one for column spacing. See the Internal Tags section for information about setting the date.

Time Format

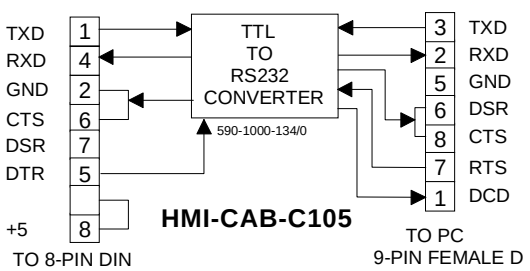
The time can be displayed in 12 hour or 24 hour format. In 12 hour format, the lowest number is 1:00 and the highest number is 12:59 (AM or PM). In 24 hour format, the clock starts at 00:01 and counts the hours and minutes up to 23:59. The 24 hour format is sometimes referred to as military or international time. See the Internal Tags section for information about setting the time.

Printer Port

The Printer Port combo box allows selection of a serial or parallel port for printing alarms, or you can select None to disable printing alarms. The parallel port selection will only appear when a display model that has a parallel port is selected in the Project Setup dialog box.

The Tool/CN3 port is an 8-pin mini-DIN style connector. The Tool/CN3 port, also known as the download port, has two functions. The primary use is to download application files from a computer to the target display. The secondary use is to print alarm messages to a serial printer.

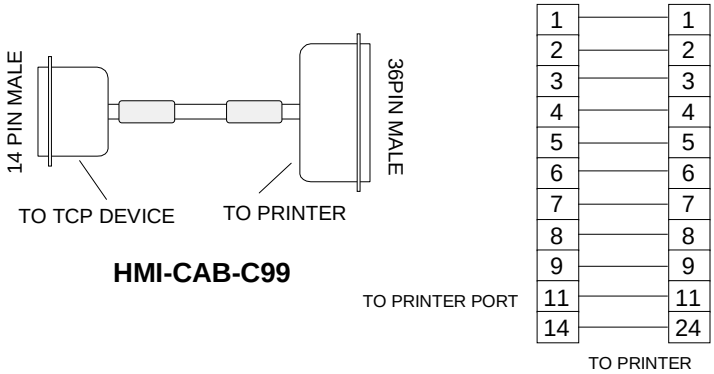
The Tool/CN3 port uses TTL signal levels and requires conversion to RS232. The HMI-CAB-C105 cable will convert the TTL signals to RS232. This cable is equipped with a 9-pin D connector that is AT compatible. The download port connector is an 8-pin mini-DIN style. The port settings are fixed at 9600 Baud, 8 bits, no parity. The pin assignments are shown in the following drawing.



PROPRIETARY INFORMATION

THIS INFORMATION IS PROVIDED AS A CONVENIENCE TO OUR CUSTOMERS. YOU ARE NOT AUTHORIZED TO CONSTRUCT THIS CABLE. UNAUTHORIZED CABLES ARE NOT SUPPORTED BY TOTAL CONTROL.

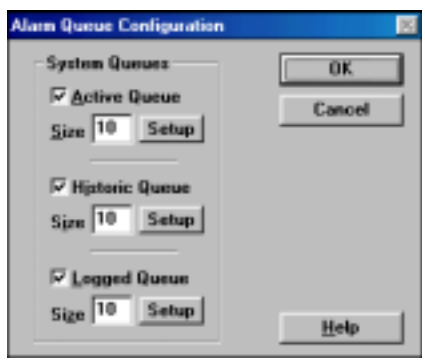
The parallel port is a 14-pin Centronics compatible connector. The HMI-CAB-C99 cable can be used to connect a display to a Centronics compatible printer.



Queue Button

The Queue button is one of the option buttons in the Alarm Configuration dialog box. Queues are internal storage buffers for alarm messages. The three possible alarm queues are Active, Historic and Logged. Each queue has a default setting of ten messages which means the display will store ten messages. Excess alarms are dumped, oldest alarms first. If you want more messages stored, increase the size of the queue.

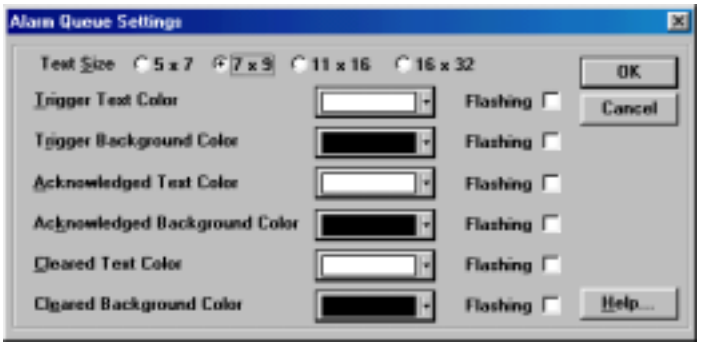
NOTE Alarm Messages stored in the QuickPanel queue are lost on a power cycle.



Alarm Queue Setup

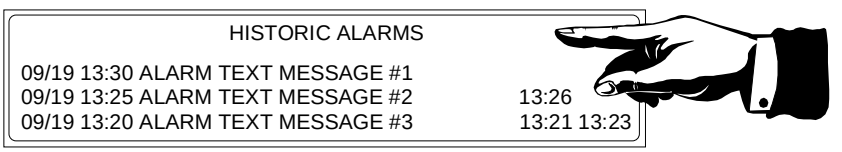
Each alarm queue has a setup button to allow selection of the text size and color for the alarm management page. See Alarm Page Display in the next heading.

When an alarm occurs, the message appears in the Alarm Window. When the operator touches the display over the Alarm Window, the current panel is removed and the alarm management page is displayed. The Alarm Queue Settings dialog is used to select the colors and size of the text displayed on the alarm page.



Alarm Page Display

In the following example, the alarm window is showing three Historic alarm messages. The Active and Logged alarm windows are similar. The example shows only three message lines, but there may be more messages in the historic alarm queue. The first alarm is a triggered alarm, the second has been acknowledged and the third alarm has been acknowledged and cleared. See "Creating an Alarm Window" on page 241.

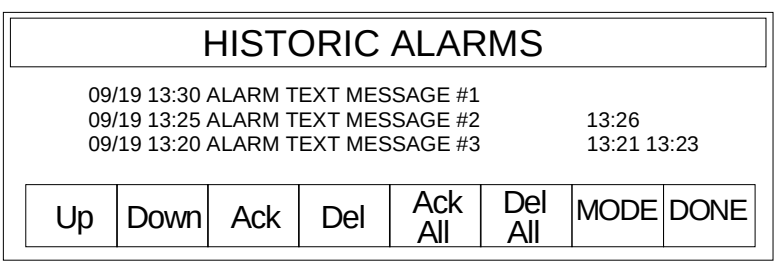


When the operator touches the display panel over the alarm window, the alarm queue will be displayed on the alarm management page. The buttons on the bottom of the alarm management page are activated by pressing the MODE button. Pressing the MODE button also displays the two horizontal lines that are used as a cursor. The DONE button is always active.

CAUTION

Do NOT press the MODE button more than once. If you do, the panel will freeze and no further operations will be displayed. Press DONE to exit.

Once the buttons are activated, they can be used to view and modify the contents of the alarm queue. The **Up** and **Down** buttons move the cursor. Remember that the alarm management page may only show a portion of the messages in the queue. The Up and Down buttons allow scrolling the alarm queue messages to the alarm page. Move the cursor to a message line and use the **Ack** button to Acknowledge the alarm, or use the **Del** button to delete the message. Use **Ack All** to Acknowledge all messages or **Del All** to delete all messages in the associated queue. Return to the panel where the alarm window is located by pressing the **DONE** button.



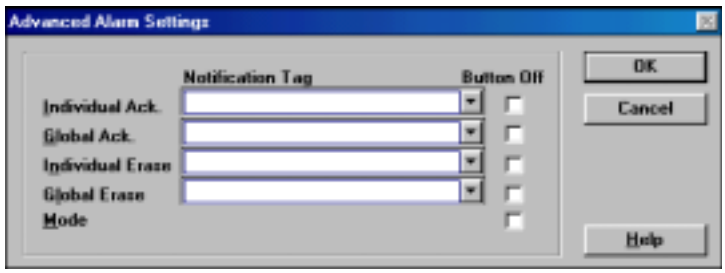
NOTE To activate the small buttons on the bottom of the alarm management page, touch the MODE button only ONCE. The DONE button is always active.

The small buttons on the bottom of the alarm management page can also be used to set a bit in a PLC, so the PLC is notified when an alarm is acknowledged or erased. See Advanced Button in the next section.

NOTE If you have installed the optional HMI-KPN-201 keypad, the alarm management page will appear with an additional row of keypad assignments. See Keypads for details.

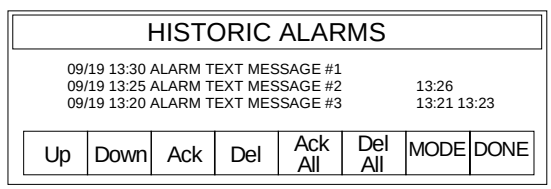
Advanced Button

The Advanced button is one of the option buttons in the Alarm Configuration dialog box.



Notification Tags

The small buttons on the bottom of the alarm management page (ACK, Del, etc.,) can also be used to set a bit in a PLC, so the PLC is notified when an alarm is acknowledged or erased. To activate the buttons for PLC notification, assign a tag variable to the button function. The notification tags are configured in the Advanced Alarm Settings dialog box.



The notification tag buttons are Individual Acknowledge (ACK), Global Acknowledge (ACK ALL), Individual Erase (DEL) and Global Erase (DEL ALL). Assign a notification tag the same way you assign other tags. For example, the Allen-Bradley PLC-5 has bit addressing available in the format B3:00/00. If you assign Individual Acknowledge (ACK) to B3:00/00, the bit will be set when the ACK button is pressed and reset when the button is released.

Button Off

The buttons on the bottom of the alarm management page have two functions. The first function is to allow you to scroll up and down through the alarms, acknowledge alarms, and delete alarms. The second function is to set bits in the PLC if the button is assigned a notification tag variable.

When you check the Button Off checkbox next to a function, that function will not appear on the alarm management page. For example, if you check the Button Off checkbox next to Global Erase, the DEL ALL button will not appear on the alarm management page.

When the alarm management page appears, you must press the MODE button to activate the other buttons (except DONE). When you check the Button Off checkbox next to the Mode button, the MODE button does not appear on the alarm management page. Therefore, there is no way to activate scrolling through the alarms, acknowledging alarms or deleting alarms. However, if you have notification tags assigned to the buttons, they will still be enabled.

Alarms Guided Tour

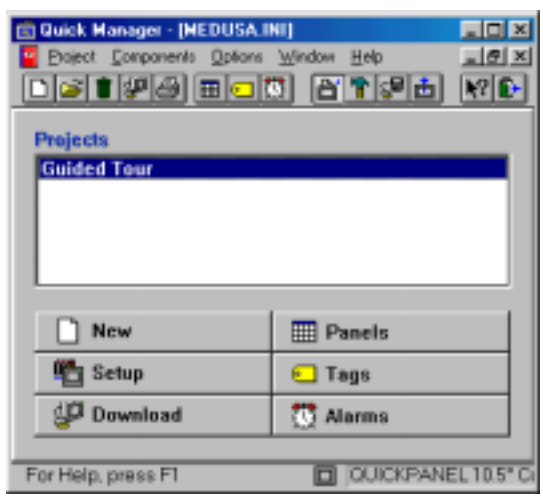
Introduction

The guided tour section is a step-by-step introduction to Alarms. It will introduce you to the procedures needed to create an alarm display. The tour references a particular PLC in order to demonstrate some of the procedures. If you take the tour, remember that the PLC variable names in the text may be different than those used in your PLC. For example, the tour references IR3:B3 as a bit in the image table. Your PLC will most likely use a different format for addressing bits.

The tour starts by assuming that you know how to use the *QUICKDESIGNER* software to create projects, design panels, and download panels to a display. If you are not familiar with QUICKDESIGNER, take the Quick Tour on page 3. All of the steps for a complete project are included in the tour, but all steps are not discussed in detail.

As your tour guide, I will take you through the tour quickly, stopping to explain points of interest. You can explore all the aspects of Alarms by going to the Alarms chapter on page 56. The first step of the tour is to go to the Project Manager dialog and create a new project called *Guided Tour* and select *QUICKPANEL jr. 5" (QPJ) Color* as the display device. In the Project Setup dialog, I selected Omron for the PLC Type. Once you have completed the tour, you can go back and change the display type and PLC to match your system configuration.

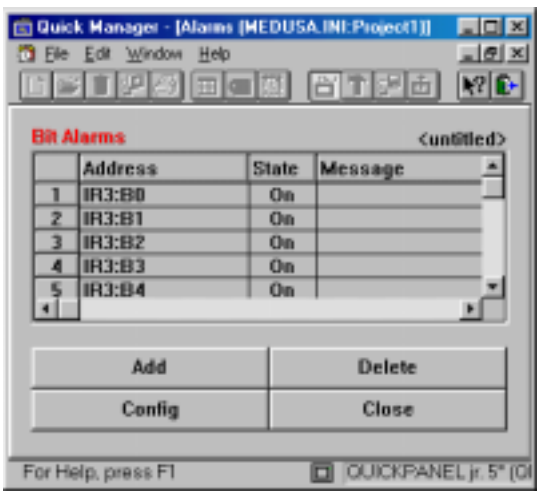
The *QUICK MANAGER* dialog box should look similar to the one below.



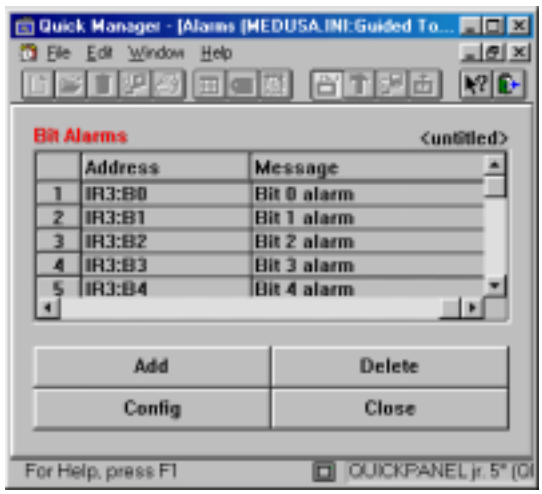
Create the Alarm Table

Click the Alarms button to display the New bit alarms dialog box.

Enter the starting address as IR3:B0 (Image Register 3, Bit 0). Enter the number of bits as 5 and make sure the Default state is set to On. Click OK and the alarm table is created.

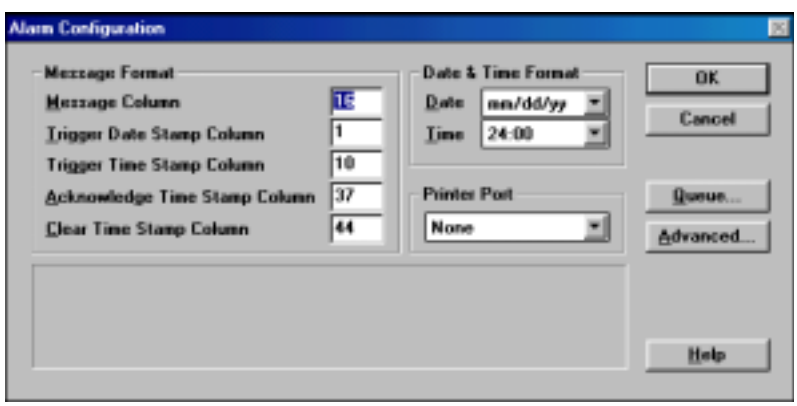


The *QUICKDESIGNER* software created the table starting at IR3:B0 and extending to IR3:B04, for a total of 5 bit addresses. The State column indicates that the alarm is triggered when the bit is turned On. Move the mouse cursor to the first empty space in the Message column and click the mouse. The space is highlighted, indicating that you can now enter message text. Type in the alarm message and use the Enter key to complete the operation. Enter the alarm messages shown in the next picture.



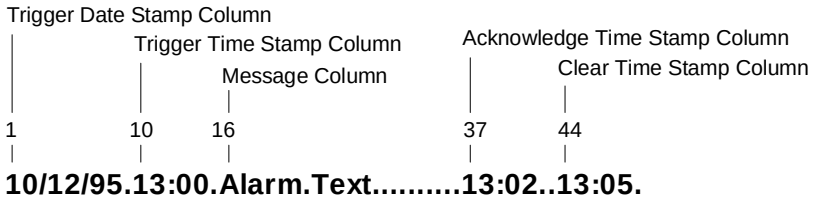
Alarm Configuration

The next step is to select the configuration options that determine how the alarm message is displayed in the alarm window. Click the Config button to display the Alarm Configuration dialog box.



Selecting the Message Format

The *QUICKPANEL jr.* Color display can show 49 5x7 characters in one line of the alarm window. The alarm message, date stamp and time stamps must fit in the forty-nine character space. The next drawing shows how a forty-nine character alarm window message might be formatted. The beginning of each column is indicated.

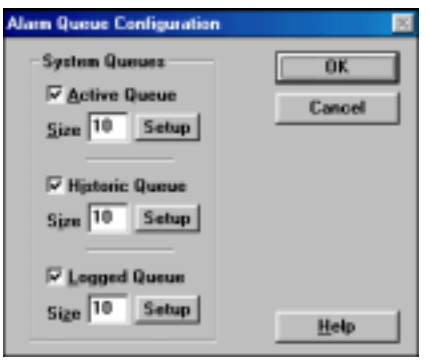


The Message Format section of the Alarm Configuration dialog box is used to select the starting column number of each portion of the alarm message. If you leave the settings in the default condition, the alarm message will appear on the display like the example.

Leave the Date format selection as mm/dd/yy. Leave the Time format set to 24:00. See the Internal Tags on page 56 for information about setting the time and date.

Configuring the Alarm Queues

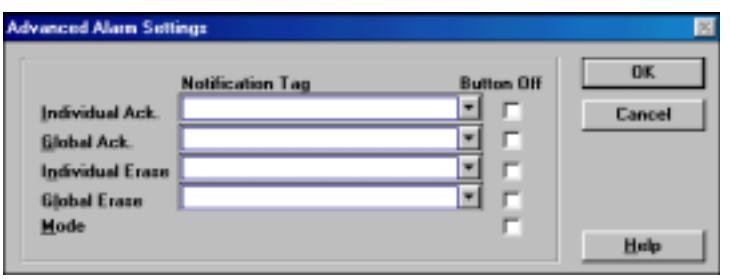
Click the Queue button to display the Alarm Queue Configuration dialog box.



The system queues hold the Active, Historic and Logged alarm messages and make them available to the alarm window. The default size of each queue is ten messages. If you do not need one or more of the alarm types, you can uncheck the boxes next to the queue name. When the number of messages exceeds the size of the buffer, the oldest message is deleted. Each queue has a setup button for changing the text size and color. If you are curious about what the Setup dialog looks like, click the Active Queue Setup button. You can change the colors if you want, but for this tour, I left them set to the default settings. Click the Cancel button in the Alarm Queue Configuration dialog box to return to the Alarm Configuration dialog box.

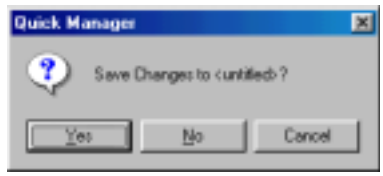
Selecting Advanced Settings

Click the Advanced button to display the Advanced Alarm Settings dialog box.

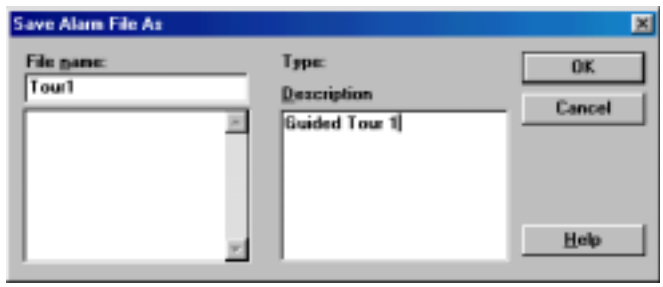


The Notification Tags do not have to be set up now, so click Cancel and return to the Alarm Configuration dialog box.

Click OK to return to the Alarms screen. Click the Close button and the following prompt appears.



Click Yes to display the Save Alarm dialog box. Enter the filename as *Tour1* and the description as *Guided Tour 1*.



Click OK to save the alarm file and return to the Quick Manager dialog box.

Creating the Alarm Window

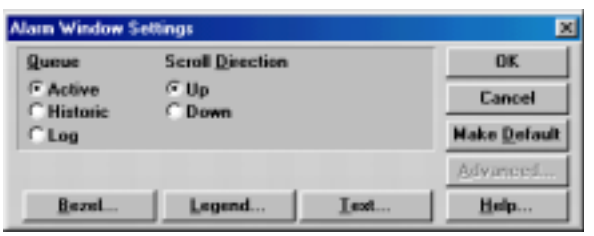
The Alarm window is used to display the formatted alarm message on a panel. For the next series of operations, you will use the Panel editor to create a panel with an alarm window.

Click the Panels button in the Project Manager dialog box. The *QUICKDESIGNER* window appears with a blank panel and the Tools menu. The Tools menu is shown below.

Click the Alarm Window tool and drag the alarm icon to the panel. Click the mouse over the desired panel location and the Alarm Window will appear.

The Alarm Window Settings dialog box will appear next to the Alarm Window. Set the Queue to Active, so that alarm messages from the Active Alarm queue will be displayed in the alarm window.

As new messages are triggered, they will scroll into the alarm window either from the top or the bottom. The default setting of *scroll up* will show the latest alarm message on the bottom of the alarm window. I prefer the Scroll Direction as Down, where the latest alarm message appears at the top of the alarm window. Take your pick.



You can select the outline and bezel colors for the Alarm Window by clicking the **Bezel** button. The touch color appears when the operator touches the alarm window.

You can change the alarm window title by clicking the **Legend** button. You can select the text color, text size, background, and outline colors.

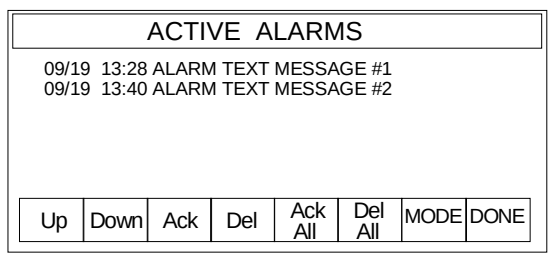
You can select the text color, background color, and text size of the alarm message as it will appear in the alarm window by clicking the **Text** button. I will leave the color selections up to you. When you are done, click the OK button to accept the changes and close the dialog box.

The alarm window that is now on your panel is too small to be of any use. Click on the alarm window and use the sizing handles to enlarge the window over four cells. This will allow you to see 49 characters across the display. Your alarm window should look like the one below.

Select File/Save to save the panel using any name you like. Select File/Exit to exit the *QUICKDESIGNER* program and return to the Project Manager.

Download the panel to the *QUICKPANEL jr.* When the download is complete, select the alarm panel. My test PLC has a row of switches wired to inputs that correspond to the address settings in the alarm table. When a switch is thrown, an alarm bit is set ON and the alarm message will appear in the alarm window. The format of the alarm message will determine how it is displayed. A sample alarm window is shown below.

Touch the alarm window to bring up the alarm manager page and the Active Alarm queue.



The alarm manager page looks different when you are using a keypad option. See Keypads, page 262and Keypad Assignment, page 125, for additional information.

You *MUST* touch the MODE button to activate the small buttons on the bottom of the panel. The **DONE** button is always active. Press the **Ack** button to Acknowledge the alarm and the acknowledge time stamp will appear. If there are multiple alarms, you can acknowledge all of them by pressing the **Ack All** button.

You can delete individual or all of the alarms in the queue by using the **Del** or **Del All** buttons. Use the **Up** and **Down** keys to move the cursor to different alarms. Press the **DONE** button to return to the alarm panel. The alarm window will show if the alarm has been acknowledged. If the alarm is cleared or deleted, the Active Alarm window will not show the alarm. However, the alarm message is stored in the Historic and Logged alarm queues.

Download and Upload Files

Introduction to QUICKCOURIER

QuickCourier is a software module that is responsible for sending or receiving data between your computer and a QuickPanel display.

A download is defined as sending a file from the computer to the display. When you start a normal download, all panels are tested for proper format. Any errors in the panels must be corrected before a download operation can begin.

The panels, the alarm file, the PLC setup file, the display setup file, and any other files necessary to create the project in the display are *compiled* into a download file. The file is then handed over to QUICKCOURIER, which is responsible for communications with the display. You can download a previously compiled file, which will be discussed later.

QUICKCOURIER sends a message from the selected COMM port to see if it can communicate with the display. Once the communication link is established, it will determine the state of the display and if it is ready to receive the download file. It checks for the correct type of display and identifies files that were previously loaded. The QUICKCOURIER dialog displays prompts for the operator, indicating the current operation or problems.

The download operation should begin automatically and continue without manual intervention. When complete, the display will prompt the operator to select a panel or automatically display a selected panel. QUICKCOURIER will detect the end of a successful download and automatically terminate.

Download Files

A download file is *compiled* from several other files which are created by different software modules. The first file is a configuration file, used to configure a target display for operation with your PLC. The configuration information includes the name of the panel that appears after a power cycle, screen saver timeout, the serial port parameters, and other option settings. Without the proper configuration information, the target display will not communicate with your PLC.

Other files include panels that will be displayed on the target display. Panels contain objects such as push buttons, pilot lights and bar graphs.

For each PLC there is a unique protocol driver file. You must have the correct protocol driver loaded into the target display in order to communicate with your PLC. During the download operation, the target display is tested to determine if the protocol file in the display is the same version and type as the one you selected during setup.

Additional files, including alarm files, may also be included in the compiled download file.

There is one last file type that can be downloaded which is not part of the *compiled* download file. This file is called a *project* file and contains all the project information in raw format. It is similar to an exported project file. This file can later be uploaded and used like an imported project file.

Selecting *Project/Store Project in Panel* is the same as clicking the *Store Project in Panel* button. The *Store Project* button is used to create a project file which is downloaded with the compiled file. The default setting for the button is selected, which means every time you start a download, the project is also sent. See also Store Project on page 41.

Selecting *Project/Upload* is the same as clicking the Upload Project button. The *Upload Project* button is used to upload a *project* file from a QuickPanel. The project file must have been saved with the downloaded file, otherwise an error message will appear. When the project file is uploaded, it is saved the same way as an imported project. The project can then be edited using QuickDesigner software. The file can be compiled and downloaded back to the QuickPanel or saved for other purposes. See also Upload on page 41.

Selecting *Project/Compile to File* is the same as clicking the Compile File button. The *Compile File* button will compile the current project and allow saving it to a selected directory. This allows saving compiled files without having to download to a connected QuickPanel. You can then use the *Download from File* button to send a compiled file (*.cmp) to one or more QuickPanels. See also Compile to File on page 41.

Selecting *Project/Download from File* is the same as clicking the Download File button. The *Download from File* button allows the user to select a compiled file (*.cmp) and send it to a QuickPanel. You do not have to compile a file prior to a download, if a compiled version of the project is available. The download button in the main menu will still support the standard compile and download operation. See also Download from File on page 42.

Download Operation

Click the Download icon or the Download from File icon in the toolbar. You can also select Download or Download File from the Project menu.

Setup for a Download/Upload

1. Apply power to the target QuickPanel. See the Hardware Reference manual for details.

2. Connect the download cable (HMI-CAB-C49) between the serial comm port on your computer and the QuickPanel download port. See the example in the Download Cable section.

3. Make sure the settings in the Setup dialog boxes are correct for your serial port. Make sure you have at least one panel with valid operators.

4. Turn on the power to the QuickPanel. Click the download button and note the operator prompt messages. If you run into problems, see the *Communication Problems* and *Download Trouble Shooting Guide* in a later section.

Target Display Condition

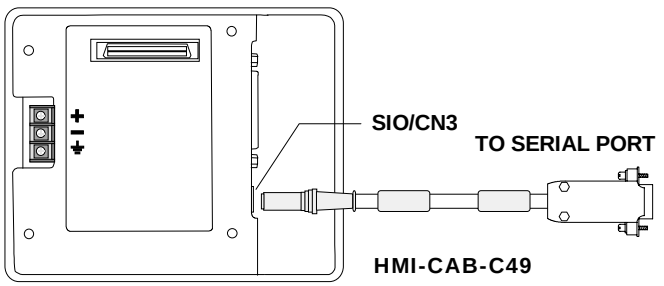
QUICKCOURIER software has the ability to read the display device status and determine which protocol has been loaded. Once *QUICKCOURIER* reads the status, it can automatically download a new application, including a new display device executable file if necessary.

NOTE If you are upgrading to a new version software, you MUST download a new display device executable file.

New factory units do not have a display device driver installed. When you apply power to a new unit, it will display a message indicating it is ready to receive a display device executable file.

Download Cable

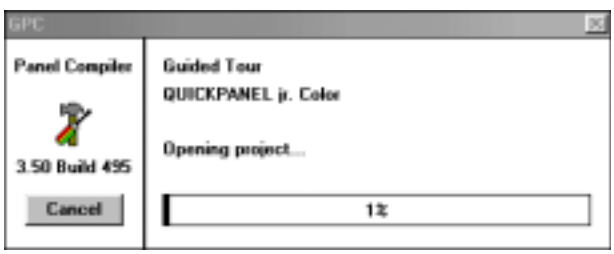
Connect the HMI-CAB-C49 cable from your computer port to the target display. The following drawing shows a *QUICKPANEL jr.* and a HMI-CAB-C49 cable connected to the download port.



NOTE Use ONLY an HMI-CAB-C49 cable for downloading.

Compiler

When the download operation is selected, a compiler program starts automatically. This program checks the panel designs for possible errors, then assembles the panel information for the download operation. All of the other files required for a download, except a *project* file, are included in the compile. A sample compile operation information box is shown below. If the compiler finds an error, it will stop and display the name of the panel and the error condition. Click the Cancel button to exit the compiler program. See the Appendix for more information about the compiler.

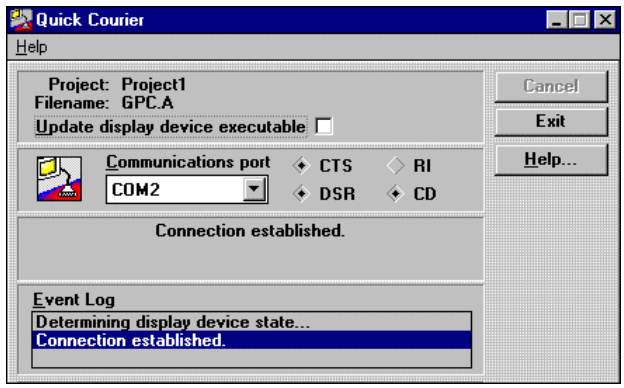


QUICKCOURIER

When the compiler completes assembling the files, it hands the *compiled* file over to *QUICKCOURIER*, which will handle sending all files to the target display.

QUICKCOURIER has the ability to read the display device status and determine which protocol has been loaded. Once *QUICKCOURIER* reads the status, it can automatically download a new application, including a new display device executable file if necessary.

The *QUICKCOURIER* dialog box is shown below.



Update Display Device Executable

You can force *QUICKCOURIER* to download a display device executable file by checking the *Update display device executable* box. Downloading a new display device executable file is generally handled by *QUICKCOURIER*, because it can determine the state of the display and load any necessary files. See Target Display Condition for more information.

Communications Port

The first time you use *QUICKCOURIER*, you will have to select an ***unused*** communication port on your computer. *QUICKCOURIER* will look for and display unused ports, but you must make the final choice. Once you select the port, *QUICKCOURIER* will attempt to use the port to connect to the target display. The status of some of the signal lines from the target display are shown next to the comm port list box. The dialog box will expand to show additional information about the target display. See the example dialog box in the following drawing.

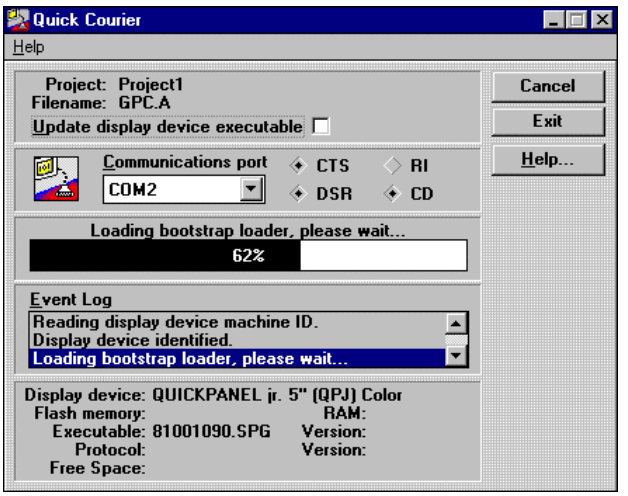
Baud Rate

Older QuickPanels can support baud rates from 9600 to 38.4K, while some newer versions (QPI-3) can support baud rates from 9600 to 115K. The default baud rate is set to 115K. If you attempt to download to a unit with a slower baud rate, the baud rate will automatically change and the AutoBaud setting in the COURIER.INI file will be changed. If you download to a QuickPanel that supports 115K and the AutoBaud setting in the COURIER.INI file is set to 38400, the download will proceed at 38400. To get the higher baud rate, the COURIER.INI file must be changed to 115K.

Courier.ini:
[Settings]
CourierWindow=63
Port=2
AutoBaud=115000

Event Log

QUICKCOURIER will keep track of all operator prompt messages and allow you to view them in a scrollable window. See the Event Log in the following dialog box.



When the application download is complete, *QUICKCOURIER* will close and the *QUICK MANAGER* program will return. If you have a default panel selected, the panel will be displayed when the download is done. If no default panel is selected, the panel with ID number 1 will be displayed.

Download Trouble Shooting Guide

1. Are you using a C49 cable manufactured by TCP? The C49 cable converts RS232 form your PC to TTL levels that the QUICKPANEL can accept through the download port. C50 cables will *not* work with QUICKPANELs.

Solution: Acquire TCP C49 cable.

2. Is your PC at least a 386DX/25 with 4M of RAM? If you are using anything less it is possible that it is taking too long for your PC to respond to the QUICKPANEL when downloading the executable. The executable download is very timing dependent.

Solution: Try a faster computer.

3. Are you using the Standard Windows communication driver? Open your C:\WINDOWS\SYSTEMI.INI file. Look for a line that starts out "comm.drv =". If you are using the standard Windows comm driver the line will say comm.drv = comm.drv. If this line says anything else, you are not using the standard Windows comm driver and this driver may not be directly compatible with all windows applications.

Solution: Comment out this line with a semicolon and insert another line that reads "comm.drv = comm.drv". Now restart windows and try the download again.

4. Are you using a laptop? If you are using a laptop it is possible that power management is probably shutting down certain devices in your PC during a download.

Solution: Turn off all power management and try again. Consult your PC manufacturer for details.

5. Has your hard disk been damaged? At DOS Prompt run chkdsk.exe. If it reports any problems, areas of your disk may have been damaged. These may include the QUICKPANEL Editor.

Solution: Run chkdisk with /f option or scandisk to repair, then reinstall the QUICKPANEL Editor, try again. If still unable to down load reinstall Windows then try again.

6. Try downloading from another comm port on your PC.

7. Try downloading from another PC.

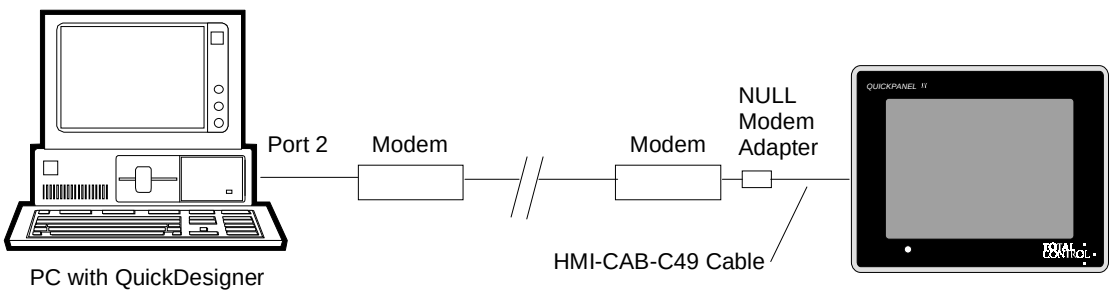
8. Try a different C49 cable.

9. Try a different QUICKPANEL.

If all of the above fails or if you are unable to complete any of the above steps, call TCP QUICKPANEL Product Support Services at (800) GE or connect to the web support site at http://www.ge-ip.com/.

Downloading QuickPanel Files with a Modem

This application note describes a method of connecting a QuickPanel to a modem so that files can be downloaded from a remote location. A diagram showing the configuration is shown below.



On one side of the modem link, a PC is connected to the modem through a serial port. In this example Port 2 is used. A communications program called HyperTerminal is used to establish modem connections. QuickDesigner Panel Editor Software is used to send the project file to the modem.

On the other side of the modem link, a QuickPanel is connected to a modem with a HMI-CAB-C49 cable and a Null Modem adapter. You may also need a 25-pin to 9-pin adapter since the HMI-CAB-C49 cable has a 9-pin header. Depending on your modem, you may also need gender changers.

Software Requirements

HyperTerminal is used to connect and configure the modems. This allows changing modem parameters, and dialing the remote modem, while in the command mode. Once Hyperterminal connects the modems, the program is disconnected to leave the modems ready for communications.

QuickDesigner uses a program called Courier to communicate with QuickPanels. Courier must be forced to a fixed baud rate. This is done by editing the COURIER.INI file found in the Quick folder. Change the AutoBaud setting to 9600. See the sample file below. Note that the Port setting is set to serial port 2.

```
[Settings]
CourierWindow = 16 63
Port=2
AutoBaud=9600
```

Running HyperTerminal

Start the HyperTerminal Program.

The Connection Description dialog appears. Enter a name and select an icon for the connection.

When the Phone Number dialog appears, select 'Direct to Com 2' in the Connect using list box.

When the Com2 Properties dialog box appears, set the parameters as:

9600 Baud

8 Data Bits

No Parity

1 Stop Bit

Flow control=None

Click Ok to enter parameters.

HyperTerminal is now in command mode. If your modem does not have dipswitches, you can enter AT commands to change the settings of the modem.

Modem Setup

The next step is to setup the modems so that they will respond properly when Courier starts the download process. The modems used in this application note are from Multi-Tech Systems, Model MT1932ZDX. These modems are capable of 19.2Kbps.

The modems must be set to:

9600 Baud

Auto Answer

DTR Forced High (Ignore DTR)

The modem used in this note required sending command codes to the modem using HyperTerminal. Your modem may have dipswitches for changing parameters. Here is a list of the commands used in setup. These commands may be different for your brand of modem.

AT$MB9600	Originate call at 9600 bps.
AT$SB9600	Set serial port to 9600 bps.
AT&S1	Let DSR follow CD.
AT&D0	Modem ignores DTR signal

Dial the remote modem using an AT command such as:

ATDT9,4862807

Once the modems are connected, a message similar to the following one should appear.

CONNECT 9600 LAPM COMPRESSED

Use the Disconnect button on the HyperTerminal tool bar to disconnect HyperTerminal. The modems should stay connected. If they do not, you must use modem commands to change the communication parameters.

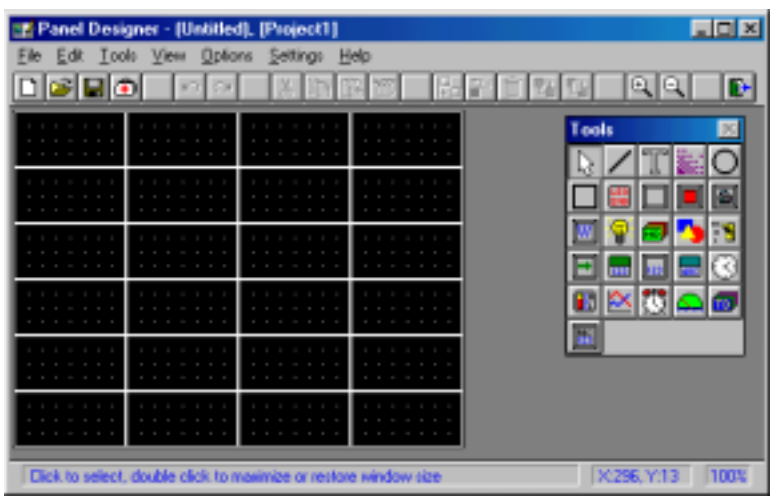
Run QuickDesigner

Start QuickDesigner. Select the project and click the download button. The file will be sent through Port 2 to the local modem, then to the remote modem to the QuickPanel. Once the project is loaded, the QuickPanel should restart with the new project.

QUICKDESIGNER

QUICKDESIGNER Window

The *QUICKDESIGNER* window is used to create and edit panels for each project. To open the *QUICKDESIGNER* window, select Panels from the Components menu, click the Panels button in the *QUICK MANAGER* window or click the Panels icon on the toolbar. A *QUICKDESIGNER* window similar to the one below will appear.


Panel Designer - [Untitled], [Project1]
File Edit Tools View Options Settings Help
Tools
Click to select, double click to maximize or restore window size
X:256, Y:13
100%

Menu Bar

Windows commands are listed on menus. Menus are represented by names in the menu bar at the top of each application window. In Windows, you select a menu, and then choose a command from that menu. Choosing the command carries out the action. The menu bar for the *QUICKDESIGNER* window is shown below.

File Edit Tools View Options Settings Help

The items listed on menus are most often commands that represent actions you can tell the application to carry out. Some menu items appear dimmed, some have check marks next to them, some may have ellipses (...) after their names, and others may have key combinations listed across from them.

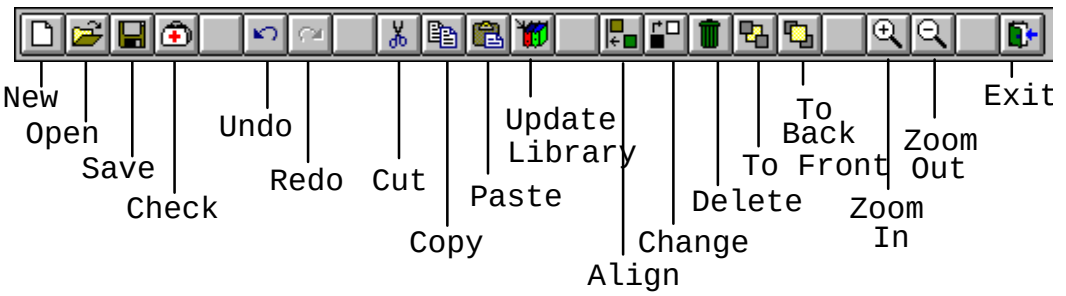
Windows applications all follow certain conventions when listing items on a menu. These conventions signal that extra information about the menu commands follows.

MENU CONVENTION	DESCRIPTION
Dimmed command name	The command is not available at this time.
An ellipsis after the name	A dialog box will appear.
A check mark next to the name	The command is active.
A key combination after the name	A shortcut for this command.
A triangle at the right side	The command leads to a cascading menu.

To choose an item from a selected menu, click the item name.

Button Bar

The button bar contains icons relating to commands found in the menu bar. By clicking an icon, you gain instant access to frequently used commands. The *QUICKDESIGNER* button bar is shown below. You can turn off the Button Bar by unchecking the selection in the Options menu.



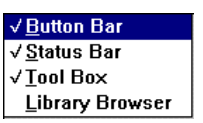
Status Bar

The status bar is located at the bottom of the window and contains context sensitive status information. The information changes are based on the location of the mouse and mouse selections. You can turn off the Status Bar by unchecking the selection in the Options menu.

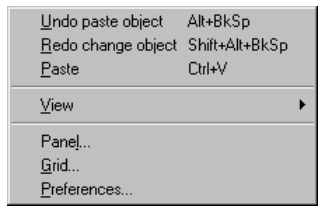
The center field of the status bar shows the coordinates of the mouse as it is moved around the panel. The right field shows the view percentage. A 1:1 view is 100%.

Right Mouse Button

If you click the ***right*** mouse button while the cursor is in the empty window space, the Options menu will be displayed. The options menu allows removing or replacing the button bar, status bar or tool box.



If you click the ***right*** mouse button while the cursor is in the grid area, a combination menu is displayed. The options in this menu include: Undo, Redo, Paste, View, Panel, Grid and Preferences.



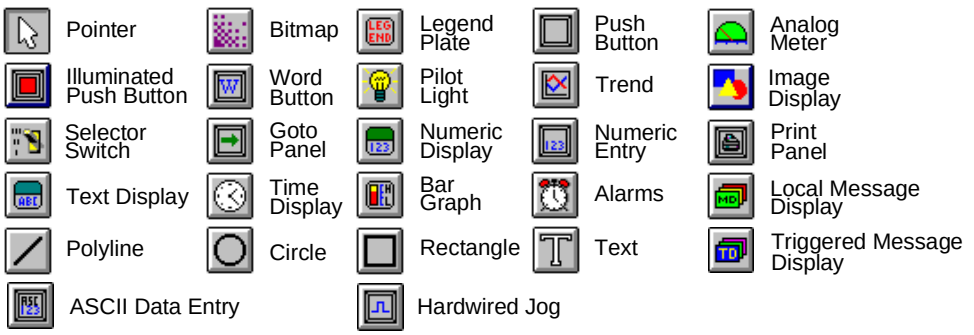
If you click the ***right*** mouse button while the cursor is over an object, a menu with most of the Edit options will be displayed.

Creating a Panel

Tool Box

When the *QUICKDESIGNER* window opens, you are presented with a blank panel and the Tool box.

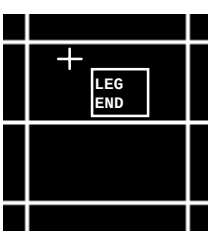
The Tool box contains the icons for each type of available tool. You can also select a tool from the Tools drop-down menu. The Tool buttons are shown below.



Mini Tool Box

If you select the QuickPanel Mini 6" Monochrome display, the Tool box will display a limited set of tools. The Mini Tool Box is shown below.

Point with the arrow cursor to the desired icon in the Tool box and click the mouse. When the cursor is moved into the screen area, a cross hair will appear with a small image identifying the type of tool selected. The example below is the Legend Plate tool. The status bar on the bottom of the window will tell you which tool is selected.

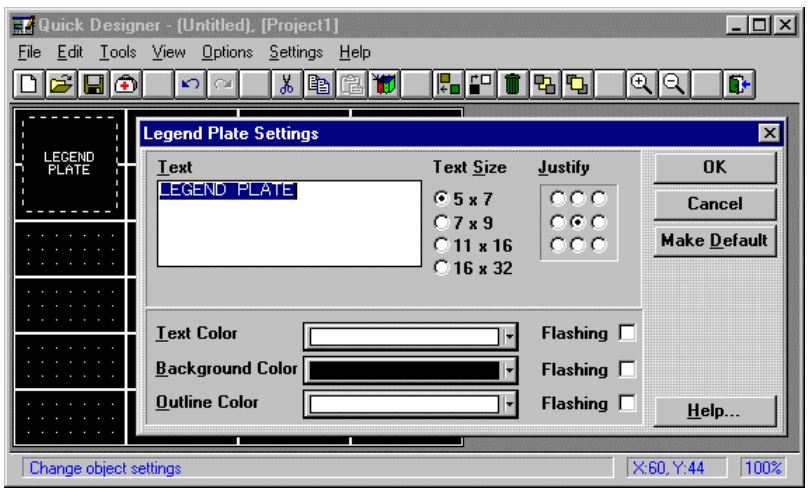


Move the cross hair to the desired cell and click the mouse. Most objects will appear across two cells as shown below.

If you want to size the object immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the object. Release the mouse button and the object is sized.

A dialog box for the selected object will appear. The drawing tools work slightly different.

The object can be placed on the panel in several different modes, based on the selections in the Settings/Preferences dialog box.

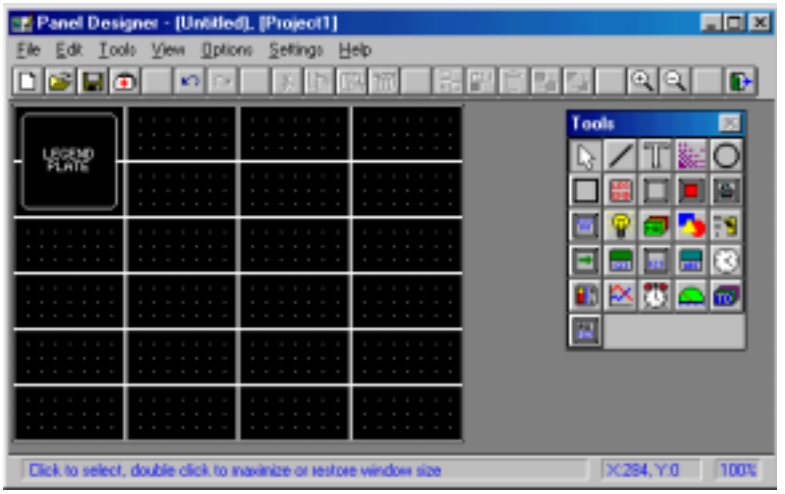


Dialog Box

The dialog box that appears will depend on the type of object selected. When the dialog box for a selected object is active, a dashed box appears around the object. In the previous example, a Legend Plate object was placed on the screen. The dialog box for the Legend Plate allows selecting the legend plate text, text size and color, background color and outline color.

Dialog boxes may contain buttons that open additional dialog boxes.

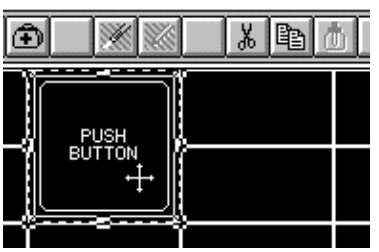
When the dialog box selections are completed, click the OK button and the dialog box is removed.


Panel Designer - [Untitled], [Project1]
File Edit Tools View Options Settings Help
LEGEND PLATE
Tools
Click to select, double click to maximize or restore window size
X:284, Y:0
100%

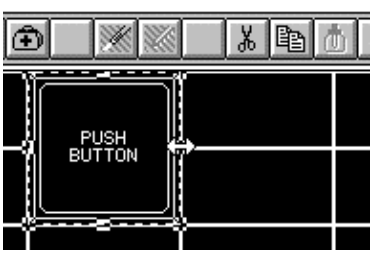
Sizing an Object

You can make objects larger or smaller by following the procedures below.

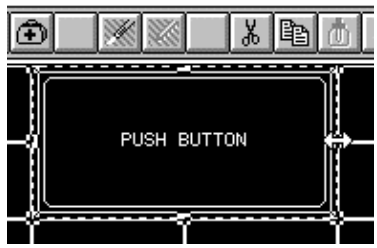
1. Move the cursor over an object and click the left mouse button. Dashed lines around the object indicate it is selected. Moving the cursor inside the dashed lines will change the cursor into a move symbol. Press and hold the left mouse button to move the object.



2. Move the cursor to one of the sizing handles (small boxes on corners and centers of edges). Sizing handles in the centers of the edges allow sizing vertically or horizontally, while corner handles allow diagonal sizing. The cursor will change to a double ended arrow when you are on top of a sizing handle.



3. Click and hold the left mouse button and drag the sizing handle in the direction selected. Click the mouse outside the dashed lines to deselect the object.



When sizing objects, the selections you make in the Grid Settings and Preferences dialog boxes will affect how you can size objects. Changing the size of an object may affect the appearance of the text within the object. Making objects too small may cut off or clip some of the text. See Text Cutoff on page 108.

To make a small pilot light, turn off the "snap size to grid" option in the Grid Settings dialog box.

All objects (except draw objects) have outlines for resizing. When you select an object, the outline first changes to a dashed outline and sizing handles appear. When you touch one of the sizing handles, the object outline changes to solid lines. The solid outlines aid in sizing the object exactly the way you want it.

Editing the Object

When you created an object, a dialog box for that object appeared. You can change the attributes of the object by double-clicking the object, which will display the dialog box. You can also display the dialog box by selecting the CHANGE option in the EDIT menu.

You can delete the object by clicking it, then pressing the DEL key or selecting the DELETE option in the EDIT menu. If you use the CUT option in the EDIT menu, the cut object is placed on the clipboard and saved until a new item is placed on the clipboard. You can delete a group of objects by pressing and holding the left mouse button and drawing a box around the objects to be deleted.

To copy an object, click the desired object, then use the COPY option in the EDIT menu. A copy is placed on the clipboard. Use the PASTE option in the EDIT menu to paste a copy of the clipboard contents to the screen. Remember, the clipboard is a temporary storage area. Items are kept there only until new items are copied to it. You can select multiple objects buy clicking the first one, holding the Shift key and clicking additional objects. Use DESELECT ALL in the EDIT menu or press the ESC key to deselect all objects.

When you are done designing a panel, use Save in the File menu to save the panel. Select New to start a new panel. Continue building and saving panels until your project is complete. When you have completed designing all panels, exit *QUICKDESIGNER* and return to *QUICK MANAGER* to download the project to the target display.

Grouping objects

Two or more objects on the panel can be grouped together so that they will act as a single object.

You can use 'select all' to select all objects for grouping. You can select several objects by clicking and holding the left mouse button as you draw a box around the objects. You can select multiple objects by holding down the SHIFT key and clicking the objects you want grouped.

Items remain temporarily grouped only until the next object selection. Select 'Group Objects' from the Edit menu (or use CTRL+G) to maintain the grouping.

Once you have grouped objects, you can use move, delete, library file, copy, etc. When objects are grouped using the 'Group Objects' selection, they remain grouped until they are ungrouped by the 'Ungroup Objects' selection.

Object Tag Display

You can view the Object Tag by enabling the option in the View menu. The sample drawing shows the tag name displayed in the upper left corner.

Keypad Tag Display

The keypad tag display is similar to the object tag display. The keypad tag operates independently of the object tag display. The keypad tag is displayed in the bottom left corner of the operator and provides a quick visual check to see which panel operators have keypads assigned. The keypad tag will appear with a panel print. You can view the Keypad Tag by enabling the option in the View menu.

Changing the Window View

You can change the view in the window from a zoomed out view of 50% to a zoomed in view of 800%. Select Zoom options from the View menu. Zoom buttons are provided for fast view changes.

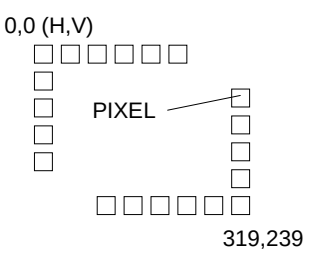
Panel Preview

You can see what the panel will look like on the target display by selecting 'Preview' from the View menu. A 1:1 full screen view is displayed.

Tiling and Drawing Grids

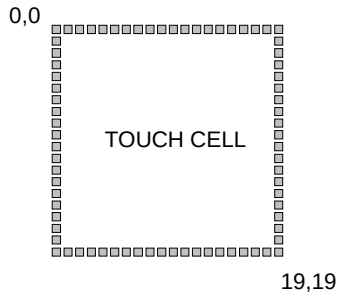
The *QUICKPANEL jr*. display is approximately 4 inches wide by 3 inches high. A pixel is a dot of light on the display panel. The *QUICKPANEL jr*. display is made up of 320 horizontal by 240 vertical pixels. Each dot has a unique address, specified by a horizontal and vertical coordinate. The origin is located in the upper left corner of the display and is designated (0,0). The opposite corner is the maximum pixel position, designated (319,239).

This drawing shows the two corners of the display with the pixels greatly enlarged.



Touch Grid

The touch screen is made up of cells that are 20 pixels on a side. The touch cells share the same coordinate system as the display. The first touch cell uses the pixels from coordinate (0,0) to (19,19). There is no physical display of the touch grid. You cannot change the number of pixels in a touch cell. The drawing shows the first touch grid with only the outline pixels.



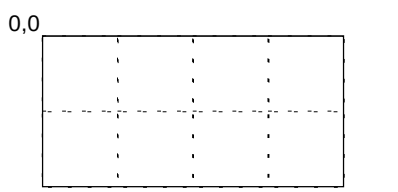
Part Objects

There are two types of part objects: those associated with touch regions and those not associated with touch regions. A push button is an example of an object associated with a touch region. A pilot light is an example of an object not associated with a touch region. Part objects associated with touch regions always occupy a complete touch cell. All touch objects must occupy a minimum of four touch cells.

Tiling Grid for Objects

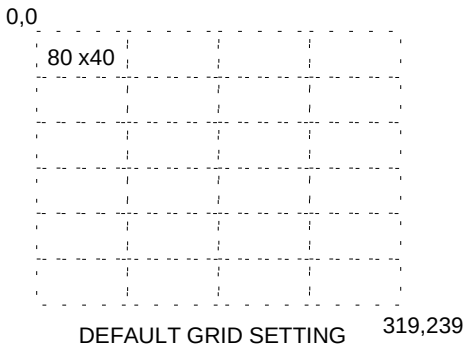
The tiling grid is a series of cells used to assist the designer in placing objects on the display. The tiling grid can appear as dots, lines or boxes. The cells appear only in the editor and not on the target display. Objects can occupy more than one cell as the cells are simply used as a layout guide. The default size of each cell is 80 pixels wide by 40 pixels high. The first cell origin point is located at (0,0) and the opposite corner is located at (79,39).

The default cell size of 80 x 40 pixels corresponds to 8 touch cells. The drawing shows a tile cell of 80 x 40 pixels and 8 touch cells.



TILING CELL with TOUCH CELLS
80 x 40 TILING CELL (DEFAULT SIZE)

The next drawing shows the tile grid for the whole *QUICKPANEL jr.* display. The default setting of 80 x 40 pixels produces 24 cells. The default Preference setting of 'Auto size on create' forces an object to be drawn on two cells (80 x 80).



DEFAULT GRID SETTING

Tiling Snap System

Another aid for placing objects on the panel is the snap feature. When placing an object on the tiling grid, the upper left corner of the object will snap to the upper left corner of a tiling cell. The remaining corners of the object attempt to come as close as possible to the snap points of the other cells. The object is restrained from snapping to the other cells in order to remain within the cells they occupy.

Snapping to grid points forces the object to be sized to the dimension of the cell. In some cases, the object may cover up the tiling grid. Objects that are associated with touch areas will first attempt to size themselves to complete touch regions. If the tiling grid is not an even multiple of the touch grid, part objects associated with touch areas will size differently than other part objects. Remember that touch areas are 20 x 20 pixels and touch objects must occupy a minimum of four touch areas (40 x 40).

NOTE All input objects (pushbuttons, Numeric Entry, etc.) are forced to the touch area grid whether the snap function is enabled or not.

Objects on the panel can be aligned to the grid using the snap feature. When moving an object, the nearest grid line will be the snap point. If you turn off the snap position option, objects can be placed close together and in some cases overlap.

Default Settings

The default settings for the tiling grid and snap are selected with the novice user in mind. These settings make it easy to quickly design a panel. The user selects a part object from the tool box and places it on the panel. The part snaps to a cell location and is drawn automatically. One mouse click for a part object to be created, sized and placed on the panel. The grid and snap system allows the user to create objects whose edges align and vertices intersect.

Drawing Grid

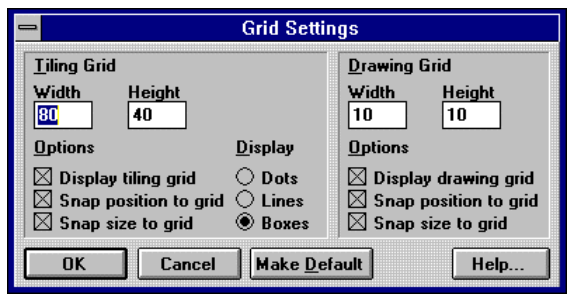
The drawing grid is a series of equally spaced horizontal and vertical dots used to assist the user in placement of objects on the display. Each grid point is a single pixel. The default setting is 10 x 10, which is a dot every ten pixels in both directions. The grid appears only in the editor but not on the target display. Object can overlap the points as they are only a drawing aid.

Drawing Snap System

The drawing snap system uses the drawing grid for locating snap points. When creating a draw object, a grid point nearest the mouse becomes the snap point. For example, if the grid is set to 5 x 5, and the mouse is located at position (4,4), the nearest snap point is (5,5). The snap feature and drawing grid can be turned off.

Grid Settings Dialog Box

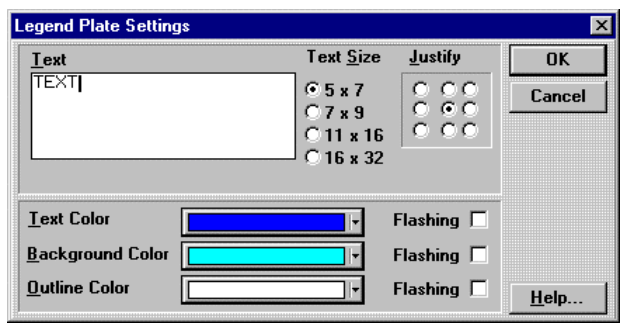
You can change the size and style of the tiling grid in the Grid Settings dialog box. The tiling grid can be dots, lines, or boxes, and can be turned off. The drawing grid is always dots. The drawing grid can also be turned off. The snap option can be turned off for both the tiling and drawing grids.



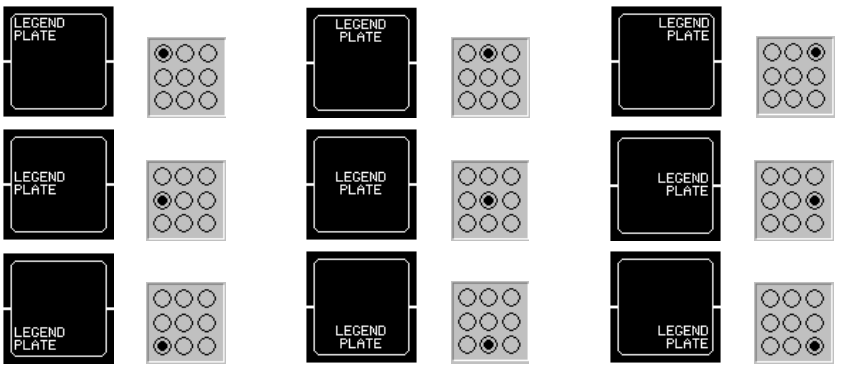
Text Justify

You can justify text in legends, states, data displays and Alarm windows. Previously the text was automatically centered within the text field.

To change the justification of the text, click the appropriate radio button in the Justify box. The following dialog box shows Justify set to the center position. The dialog box also shows the color selection bars.



The following pictures show how text can be justified in a Legend Plate. Note how the radio buttons correspond to the text position.



Text Size

The four text sizes are 5 x 7, 7 x 9, 11 x 16, and 16 x 32. The text size options will appear in the Text Size section of many dialog boxes.

Text Cutoff

When entering text for legend plates, lenses, etc., you must allow for proper sizing of the text and the panel object. You can change the text size and the size of the object to accommodate the desired text display. In the following example, a legend plate on the left appears with 7 x 9 text. The center picture shows the text enlarged to 11 x 16 and the object enlarged horizontally. Note that only the word "LEGEND" appears. The rest of the text has been clipped. To see all the text, the object must be sized vertically, as shown in the picture on the right.

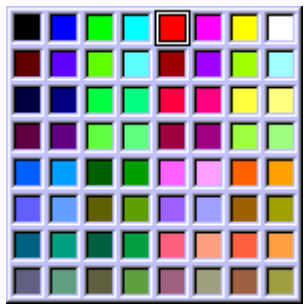
All graphical tools that contain legends and lenses all output their wrapped text in a standard way. If the text appears clipped (missing text) in the editor, it will be clipped on the panel at runtime.

Some users may find that, after upgrading to QuickDesigner 3.50, the text in some of their graphical tools has vanished, both in the editor and at panel runtime. If you encounter this, it is most likely the result of our Text Cutoff Fix. Please review the information in the Troubleshooting Guide found in the Appendix.

Color Selection

Originally the QuickPanel supported only eight colors (BLACK, RED, GREEN, YELLOW, BLUE, MAGENTA, CYAN, WHITE).

With the addition of the Series 3 QuickPanel, Quick Designer will now support 64 colors. That means when you are using a Series 3 QuickPanel, and you click on one of the color options, a 64-color palette will appear. The palette appears whenever a color selection combo box is clicked inside the QuickDesigner software.



Color Index Numbers

The Local Message Display and the Triggered Message Display allow importing and exporting text files that contain color descriptions. Colors can be specified by their color name or by their index number. The index numbers are laid out on a grid that corresponds to the color palette. The index number grid is shown below. The index numbers can be cross-referenced to the 64-color grid so you can match Color Index numbers to a Color name.

	C1	C2	C3	C4	C5	C6	C7	C8	
R1	1	2	3	4	5	6	7	8	WHITE (ColR1C8)
R2	9	10	11	12	13	14	15	16	TURQ (ColR2C8)
R3	17	18	19	20	21	22	23	24	WHEAT (ColR3C8)
R4	25	26	27	28	29	30	31	32	PALGRN(ColR4C8)
R5	33	34	35	36	37	38	39	40	ORANGE (ColR5C8)
R6	41	42	43	44	45	46	47	48	GOLD (ColR6C8)
R7	49	50	51	52	53	54	55	56	TAN (ColR7C8)
R8	57	58	59	60	61	62	63	64	KHAKI (ColR8C8)
									WOOD (ColR8C7)

64-Color Grid

The Color Grid shows the Color Index number and the Color Name. The help files contain sample colors, however, you must have a display capable of showing 64 colors.

The colors in the grid can be referenced in two ways when preparing an import file for a Local Message Display (*.lmd) or a Triggered Message Display (*.tmd).

Use the names shown in the 64-Color Grid.

Use the Row and Column numbers shown in the Color Index Numbers table (ie. BLACK = ColR1C1; KHAKI = ColR8C8)

Color Index	Color Import Name	Color Index	Color Import Name	Color Index	Color Import Name
1	BLACK	23	YEL2	45	PRPL2
2	BLUE	24	WHEAT	46	STLBLU
3	GREEN	25	PLUM	47	DKORNG
4	CYAN	26	DKPURP	48	GOLD
5	RED	27	GRN3	49	BLU5
6	MAGENTA	28	MNTGRN	50	SEAGRN
7	YELLOW	29	DKPINK	51	DKCYAN
8	WHITE	30	MDMAG	52	GRN4
9	DKRED	31	LOLGRN	53	PINK2
10	BLU2	32	PALGRN	54	PLPINK
11	LWNGRN	33	BLU3	55	CORAL
12	CYAN2	34	SKYBLU	56	TAN
13	INDRED	35	FSTGRN	57	SLTBLU
14	PURPLE	36	MDGRN	58	CDTBLU
15	YLWGRN	37	ORCHID	59	DKGRAY
16	TURQ	38	PALMAG	60	GRN5
17	NVYBLU	39	TANGER	61	DKPLMG
18	RYLBLU	40	ORANGE	62	GREY
19	GRN2	41	RCHBLU	63	WOOD
20	SPRGRN	42	BLU4	64	KHAKI
21	RED2	43	DKGOLD		
22	FUSCH	44	OLVGRN		

RGB Color Map

Here is the list of colors that are available on the 64-color display referenced to their RGB values. The center column shows how colors from a 64 color palette are mapped to an 8 color palette.

	0-255 Values			8 Color	Percent Values		
	Red	Green	Blue		Red	Green	Blue
1	0	0	0	Black	0	0	0
2	0	0	255	Blue	0	0	100
3	0	255	0	Green	0	100	0
4	0	255	255	Cyan	0	100	100
5	255	0	0	Red	100	0	0
6	255	0	255	Magenta	100	0	100
7	255	255	0	Yellow	100	100	0
8	255	255	255	White	100	100	100
9	112	0	0	Black	44	0	0
10	112	0	255	Blue	44	0	100
11	112	255	0	Green	44	100	0
12	112	255	255	Cyan	44	100	100
13	176	0	0	Red	69	0	0
14	176	0	255	Magenta	69	0	100
15	176	255	0	Yellow	69	100	0
16	176	255	255	White	69	100	100
17	0	0	112	Black	0	0	44
18	0	0	176	Blue	0	0	69
19	0	255	112	Green	0	100	44
20	0	255	176	Cyan	0	100	69
21	255	0	112	Red	100	0	44
22	255	0	176	Magenta	100	0	69
23	255	255	112	Yellow	100	100	44
24	255	255	176	White	100	100	69
25	112	0	112	Black	44	0	44
26	112	0	176	Blue	44	0	69
27	112	255	112	Green	44	100	44
28	112	255	176	Cyan	44	100	69
29	176	0	112	Red	69	0	44
30	176	0	176	Magenta	69	0	69
31	176	255	112	Yellow	69	100	44
32	176	255	176	White	69	100	69
33	0	112	255	Blue	0	44	100
34	0	176	255	Cyan	0	69	100
35	0	112	0	Black	0	44	0
36	0	176	0	Green	0	69	0
37	255	112	255	Magenta	100	44	100
38	255	176	255	White	100	69	100
39	255	112	0	Red	100	44	0
40	255	176	0	Yellow	100	69	0
41	112	112	255	Blue	44	44	100
42	112	176	255	Cyan	44	69	100
43	112	112	0	Black	44	44	0

	0-255 Values			8 Color	Percent Values		
	Red	Green	Blue		Red	Green	Blue
44	112	176	0	Green	44	69	0
45	176	112	255	Magenta	69	44	100
46	176	176	255	White	69	69	100
47	176	112	0	Red	69	44	0
48	176	176	0	Yellow	69	69	0
49	0	112	176	Blue	0	44	69
50	0	176	176	Cyan	0	69	69
51	0	112	112	Black	0	44	44
52	0	176	112	Green	0	69	44
53	255	112	176	Magenta	100	44	69
54	255	176	176	White	100	69	69
55	255	112	112	Red	100	44	44
56	255	176	112	Yellow	100	69	44
57	112	112	176	Blue	44	44	69
58	112	176	176	Cyan	44	69	69
59	112	112	112	Black	44	44	44
60	112	176	112	Green	44	69	44
61	176	112	176	Magenta	69	44	69
62	176	176	176	White	69	69	69
63	176	112	112	Red	69	44	44
64	176	176	112	Yellow	69	69	44

QuickDesigner Graphical Objects

Push Buttons, Pilot Lights, Legend Plates, etc., are called Panel Design Objects (PDO). These objects are made up of active and static elements. A good example of a static object is a legend plate, which has a rectangle element and a text element. A good example of a active object is a numeric data display, which has a legend plate element and a data readout element.

When you attempt to put one graphic object on top of another graphic object, you must consider the attributes of each object. The foreground/background attributes observed in the QuickDesigner editor are DIFFERENT than those observed in runtime (QuickPanel operating system).

Please Note:

- Any element that is static will obey the foreground/background rules as observed in the editor.

This means that if you put a static element on top of another static element, they will appear the same way when the panel is displayed at runtime. For example, if you put a red circle on top of a green rectangle, it will that way when the panel is displayed at runtime.

- Any element that is Active, will always bleed through to the front of the screen, even if the editor shows it as being behind something else.

This means that if you put a static object on top of an active object, the active element will bleed through when the panel is displayed at runtime. The runtime (QuickPanel operating system) makes active elements visible at all times.

It is a common practice to put bitmaps on top of numeric data entry objects. However, the data readout bleeds through the bitmap. You can turn off the data readout by unchecking the Data Display Visible checkbox in the Numeric Data Entry Settings dialog box.

Some graphical objects, like the Push Button, can be displayed in a Simple form. This form has no active elements and can be covered with a bitmap. The Print Screen button, the Push Button, and the Word Button all have a Simple form.

The following table shows panel object (PDO) elements and the status of each element.

Object	Element	Status
Alarm Tool	Bezel	Active/Bleeds
	Legend	Static
	Alarm Que	Invisible
	Touch Object (T-tag)	Active/Invisible
	Alarm Object (A-tag)	Active/Bleeds
Ascii Data Entry	Ascii Screen	Invisible
	Ascii Trigger	Invisible
	Bezel	Active/Bleeds
	Legend	Static
	Touch Object (T-tag)	Active/Invisible
	Text Display Object (S-tag)	Active/Bleeds
Auxiliary Port Button	Legend	Static
	Bezel	Active/Bleeds
	Touch Object (T-tag)	Active/Invisible
Bitmap Tool	Image Library	Static
BarGraph Tool	Legend	Static
	Bargraph Object (G-tag)	Active/Bleeds

Circle Object	Circle Object	Static
Goto Panel Button	Legend	Static
	Touch Object (T-tag)	Active/Invisible
Illuminated Push Button Standard	Image Library Load (L-tag) for entire object	Active/Bleeds
	Touch Object (T-tag)	Active/Invisible
Illuminated Push Button	Legend	Static
Circular (states identical)	Image Library Load (L-tag) for Round Bulb	Active/Bleeds
	Touch Object (T-tag)	Active/Invisible
Illuminated Push Button Circular (states different)	Image Library Load (L-tag) for entire object	Active/Bleeds
	Touch Object (T-tag)	Active/Invisible
Local Image Display	Image Library Load (L-tag)	Active/Bleeds
Legend Plate Tool	Rectangle Object	Static
	Text Object	Static
Meter Graph Tool	Legend	Static
	Scale	Static
	MeterGraphObject (g-tag)	Active/Bleeds
Local Message Display	Image Library Load (L-tag) for entire object	Active/Bleeds
Numeric Data Display	Legend (2)	Static
	DataReadout Object (E-tag)	Active/Bleeds
Numeric Data Entry	Legend	Static
	Bezel (1)	Active/Bleeds
	Touch Object (T-tag)	Active/Invisible
	DataReadout Object (E-tag) (1)	Active/Bleeds
Pilot Light Standard	Image Library Load (L-tag) for entire object	Active/Bleeds
Pilot Light	Legend	Static
Circular (states identical)	Image Library Load (L-tag) for Round Bulb	Active/Bleeds
Pilot Light Circular (states different)	Image Library Load (L-tag) for entire object	Active/Bleeds
Print Screen Button	Legend	Static
(Standard)	Bezel	Active/Bleeds
	Touch Object (T-tag)	Active/Invisible
Print Screen Button	Legend	Static
(Circular)	Image Library Load (L-tag) for Round Bulb	Active/Bleeds
	Touch Object (T-tag)	Active/Invisible
Print Screen Button	Legend	Static
(Simple) (3)	Touch Object (T-tag)	Active/Invisible
Polyline Tool	Polyline Object	Static

PushButton (Standard)	Legend	Static
	Bezel	Active/Bleeds
	Touch Object (T-tag)	Active/Invisible
PushButton (Circular)	Legend	Static
	Image Library Load (L-tag) for Round Bulb	Active/Bleeds
	Touch Object (T-tag)	Active/Invisible
PushButton (Simple) (3)	Legend	Static
	Touch Object (T-tag)	Active/Invisible
PushButton (None) (3)	Touch Object (T-tag)	Active/Invisible
Rectangle Tool	Rectangle Object	Static
Selector Switch Tool	Bezel	Active/Bleeds
	Legend	Static
	Image Library Load (L-tag) for states text and background	Active/Bleeds
	Touch Object (T-tag)	Active/Invisible
Text Tool	Text Object	Static
Time/Date Display	Legend	Static
	Delimiters (: or /)	Static
	Time/Date Readouts (E-tag)	Active/Bleeds
Triggered Message Display	Image Library Load (L-tag) for entire object	Active/Bleeds
	Bit Monitor Script (w-tag)	Active/Invisible
Trend Graph Tool	Scale	Static
	Title	Static
	Trend Library Load (L-tag) for trend display area	Active/Bleeds
	Trend Data File	Invisible
Text Display	Legend	Static
	Text DataReadout Object (S-tag)	Active/Bleeds
Video Tool	Button Bezel	Active/Bleeds
	Button Legend	Static
	Button Touch Object (T-tag)	Active/Invisible
	Video Object (V-tag)	Active/Bleeds
	Image Library Load (L-tag) for entire object	Active/Bleeds
WordButton (Standard)	Legend	Static
	Bezel	Active/Bleeds
	Touch Object (T-tag)	Active/Invisible
WordButton (Circular)	Legend	Static
	Image Library Load (L-tag) for Round Bulb	Active/Bleeds
	Touch Object (T-tag)	Active/Invisible
WordButton (Simple) (3)	Legend	Static
	Touch Object (T-tag)	Active/Invisible

1. These elements can be made invisible, which will not cause bleeding.

2. The legend plate can be made invisible.

3. This button can be covered with a bitmap and will not bleed through.

Other Editing Features

The panel editor is designed to operate so that you can quickly design panels. Once you are familiar with the methods used to add objects and create panels, you may want to change the way the editor operates. For example, you may not want the panel tested for overlapped objects. You may not want to see the grid displayed while editing objects. The Settings menu allows changing the panel background color, the settings of the grids, and three levels of user preferences. See Settings on page 128.

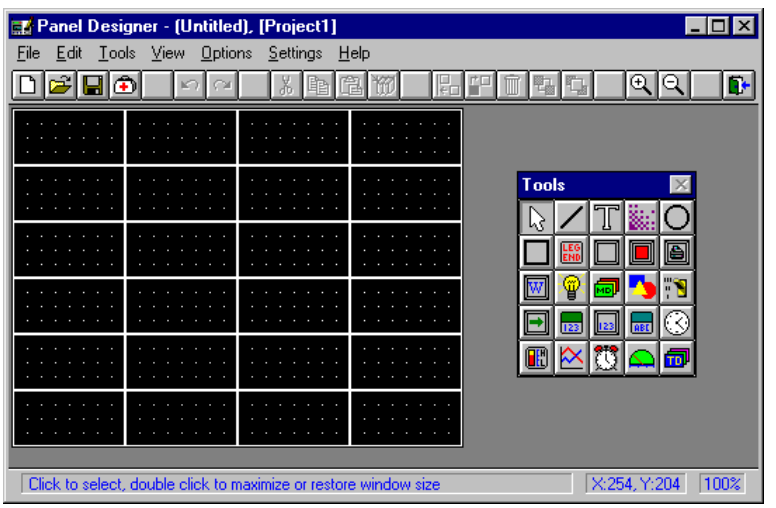
Menu Commands

File Menu

The File menu is shown below. Most File menu options have corresponding icons in the tool bar.

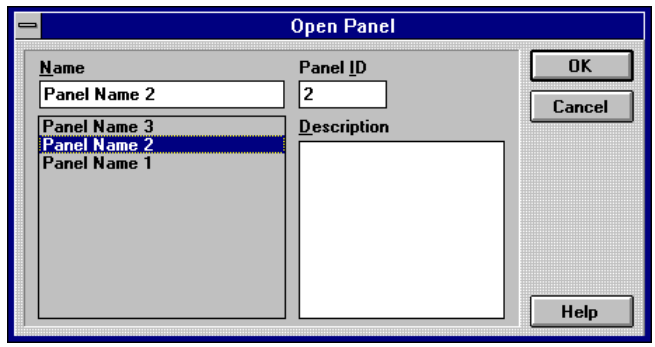
New

Click the New icon or select New from the File menu to start a new panel editing session. Selecting *New* will display a blank panel ready for editing. The panel size is determined by the type of display device you selected in the Setup dialog.


Panel Designer - [Untitled], [Project1]
File Edit Tools View Options Settings Help
Tools
Click to select, double click to maximize or restore window size
X:254, Y:204
100%

Open

Click the Open icon or select Open from the File menu to open an existing panel for editing. The panel name is shown in the Name box and the panel identification number is shown in the Panel ID box. If you entered a description of the file when it was saved, the text will appear in the Description field.



Close

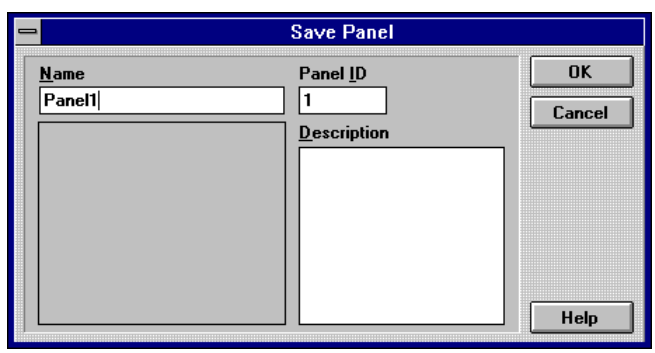
Close the current file.

Save

Click the Save icon or select Save from the File menu to save the current panel using the file name already assigned. Error checking is automatic each time you save a panel. For error information, see Check on page 118and Resource Manager on page 118.

Save As

Save the current panel using a new file name. Enter the filename in the Name field. Move the cursor to the Description field and enter a description. The Panel ID is the identification number that can be used by a PLC to select a panel. When the ID number is written to the Panel Trigger Tag register in the PLC the associated panel will be displayed. The Panel Trigger tag is selected in the Quick Panel Configuration dialog box. See the *QUICK MANAGER* section. The system will automatically assign the panel ID when the panel is created. You can change it to any number up to 8999. Panel ID numbers must be unique within a project. Error checking is automatic each time you save a panel. For error information, see Check on page 118and Resource Manager on page 118.



Check

Click the Check icon or select Check from the File menu to check the panel design for potential errors. Errors are reported in a dialog box and you will have the option of ignoring one or all errors. Error checking is automatic each time you save a panel. Make sure you ungroup all objects because grouping causes false readings during error checking. See also Resource Manager.

Resource Manager

Each panel object is assigned a resource count. For example, a Pilot Light is assigned a resource count of 1. The table of objects and associated resouces is shown below. Note the special condition for Triggered Message Display objects.

QuickDesigner Graphical Object	ESTIMATED Resource Use Per Object
Alarm Window	2
Ascii Entry	3
Bitmap	0
BarGraph	1
Circle	0
Goto Panel Button	1
Illuminated Push Button	4
Local Image Display	2
Legend Plate	0
Pie Graph	1
Local Message Display	2
Numeric Data Display	1
Numeric Data Entry	3
Pilot Light	1
Print Screen Button	3
Line/PolyLine	0
PushButton	3
Rectangle	0
Selector Switch	4
Text Object	0
Time Display	1 – 4 (dependant on display format)
Triggered Message Display	See Note 1.
Trend Graph	1 – 8 (one per pen)
Text Display	1
Video Display	1
Word Button	3
Print Trigger Tag	3 per panel in project
Panel Confirmation Tag	1

Note 1: Determining the resource usage for the TMSD involves some calculations. The general rule of thumb is: “One resource will be consumed for every three addresses referenced in a TMSD”.

Most QuickPanels will support the following TMSD usage: 3 full TMSD per panel (16 states each, 4 addresses per state)

The user can increase the number of TMSD on their panel by reducing:

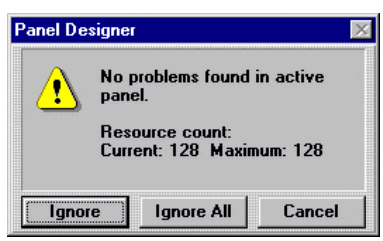
Number of states used per TMSD
Number of addresses referenced per state.

A more accurate resource usage calculation is the sum of the following two items:
ResourceUsage = 2 * (Number of States in TMSD) + 2;
ResourceUsage += 2/3 (Total Number of Address Referenced in the TMSD)

Each complete panel in a project is limited to a maximum number of resources. The type of QuickPanel you are using for the project will determine the maximum number of resources allowed for each panel. A list of QuickPanel models and maximum resources is listed below.

QUICKPANEL Type	Max Allowed Resources Per Panel
QUICKPANEL 10.5" Color (QPI-2xxxx)	256
QUICKPANEL 10.5" Color (QPI-3xxxx)	256
QUICKPANEL 10.5" Color Video	256
QUICKPANEL 10.5" LCD Monochrome	256
QUICKPANEL 12.1" Color TFT	256
QUICKPANEL 6" HandHeld Color	256
QUICKPANEL 6" HandHeld Monochrome	256
QUICKPANEL 9" EL Mono (QPI-2xxxx)	256
QUICKPANEL 9" EL Mono (QPI-3xxxx)	256
QUICKPANEL jr. 5" (QPJ) Color	128
QUICKPANEL jr. 5" (QPJ) Monochrome	128
QUICKPANEL jr. 6" (QPK) Monochrome	128
QUICKPANEL jr. 6" Color (QPK-2xxxx)	128
QUICKPANEL jr. 6" Color (QPK-3xxxx)	256
QUICKPANEL Mini 6" Monochrome	128
QUICKPANEL 9" (QPI-11100-S2P Series A only)	256

When you have completed a panel, you can check the resource count by clicking the Check icon or selecting Check from the File menu. Resources are also checked each time you save a panel. The message box displays the number of resources used on a panel.



If too many resources are used, the following warning message is displayed.

To ensure the panel does not contain more than the maximum number of resources, use the following procedures:

1. Save the panel often. You will receive a warning when the number of resources has exceeded the maximum allowed.

2. Perform a resource check (File\Check) or click the Check (doctor bag) icon in PanelDesigner.

If you exceed the resource count, remove objects until the count is at or below the maximum. If you attempt to download the project, a warning will appear when Courier starts.

Delete

Delete a panel from the list of panels for the current project.

Importing and Exporting Panels

If you create a custom panel for Project X and you want to use the identical panel for Project Z, the panel can be exported to an external file format and later imported to a new project. The exported panel objects have tag variables that are valid for Project X. When you are working on a different project, the custom panel is first imported. The tag variables for each object must then be changed to match the new project PLC type. The panel is then saved with the modified custom panel.

Procedure:

1. Go to the *QUICKDESIGNER* program and create a custom panel. Each object will have a tag variable that is valid for the project PLC type. Save the panel.

2. Select Export from the file menu and export the panel using 8 characters or less. The file will be given the *.pnl extension. Example: filename.pnl

3. Exit the *QUICKDESIGNER* program and return to the *QUICK MANAGER* program. Create a new project or select an existing project. Go to *QUICKDESIGNER* and select Import from the file menu.

4. Import the desired panel. Change the tag variables for each object so that they are valid for the new project PLC type. Save the panel for the new project.

5. Continue to import other panels until the project is complete.

Import

Load a file saved in *.pnl format. When you import a panel with the *.pnl extension, save it with your own panel name. For example, if you import PANEL1.PNL, save it immediately to the new panel name of PANEL1.

NOTE Long file names are supported, beginning with QuickDesigner version 3.50.

Export

Save the panel design in *.pnl format. When you import a panel with the *.pnl extension, save it with your own panel name. For example, if you import PANEL1.PNL, save it immediately to the new panel name of PANEL1.

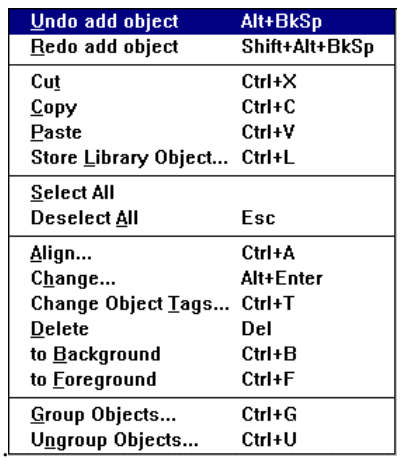
NOTE Long file names are supported, beginning with QuickDesigner version 3.50.

Exit

Quit the *QUICKDESIGNER* program.

Edit Menu

The Edit Menu is shown below. To the right of each menu option is a key or combination of keys. You can select the option from the menu or use the key/key combinations to perform the function.



Undo [last operation] (Alt+BkSp)

Undo the last operation. The undo command will indicate what type of operation was last performed.

Redo [last operation] (Shift+Alt+BkSp)

Redo the last operation. The redo command will indicate what type of operation it will perform.

Cut (Ctrl+X)

Remove the selected object and place it on the clipboard.

Copy (Ctrl+C)

Copy the selected object to the clipboard.

Paste (Ctrl+V)

Paste a copy of the contents of the clipboard to the panel. The contents of the clipboard remain until you cut or copy a new object.

Store Library Object (Ctrl+L)

The selected object or group of objects are stored in a library. See Library Browser, page 128 and 136, and Library Tour, page 133.

Select All

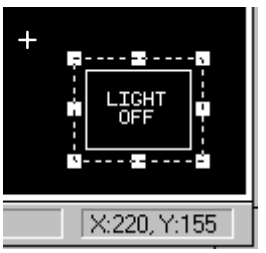
Selects all objects on the panel.

Deselect All (Esc)

Deselects all objects that are currently selected.

Align (Ctrl+A)

Aligns the selected object to a vertical or horizontal coordinate. First select the object, then select align from the Edit menu. A cross hair cursor will appear on the screen.



The cursor position information box is located in the bottom, right corner of the screen. Move the cursor to the desired position and click the left mouse button. The following dialog box appears. Select Horizontal or Vertical alignment. Click OK and the object will be aligned to the selected coordinates.

Change (Alt+Enter)

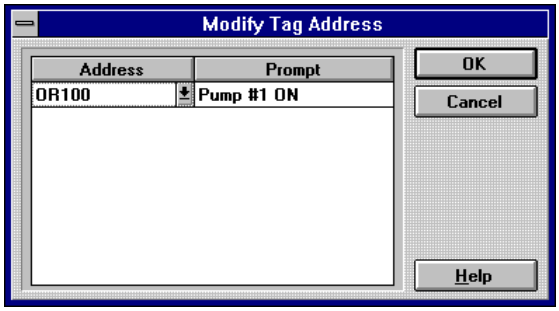
Change the attributes of the selected object. You can also double click an object to display the associated settings menu.

Change Object Tags (Ctrl+T)

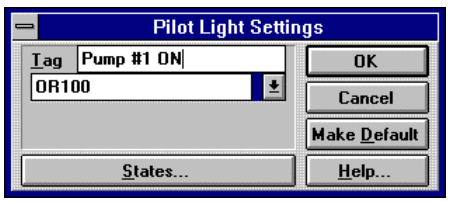
Modify the Tag Attributes of a selected object or group of objects. The Modify Tag Attributes dialog box appears.

You can edit the Address by clicking the name and typing a new name. Double click (F2) the name to enter the edit mode. Use ESC to undo the edit mode. Select a different Address by clicking the down arrow to display a list box.

The Prompt field is used to enter a description of the tag. The prompt will appear in any settings dialog box where the tag is used. You can edit the Prompt text the same way you edit the Address text. The example shows the Prompt text in the Pilot Light Settings dialog box.



You can also enter a new tag prompt by double clicking in the area above the tag field. Enter the prompt and press return.



Delete (Del)

Delete the selected object from the screen. Object is not placed on the clipboard.

to Background (Ctrl+B)

Selected panel objects can be moved from the foreground to the background.

to Foreground (Ctrl+F)

Selected panel objects can be moved from the background to the foreground.

Group Objects (Ctrl+G)

Two or more objects on the panel can be grouped together so that they will act as a single object.

You can use 'select all' to select all objects for grouping. You can select several objects by clicking and holding the left mouse button as you draw a box around the objects. You can select multiple objects by holding down the SHIFT key and clicking the objects you want grouped.

Items remain temporarily grouped only until the next object selection. Select 'Group Objects' from the Edit menu (or use CTRL+G) to maintain the grouping.

Once you have grouped objects, you can use move, delete, library file, copy, etc. When objects are grouped using the 'Group Objects' selection, they remain grouped until they are ungrouped by the 'Ungroup Objects' selection.

Ungroup Objects (Ctrl+U)

Objects that are temporarily grouped are ungrouped by selecting another object. When objects are grouped using the 'Group Objects' selection, they remain grouped until they are ungrouped by the 'Ungroup Objects' selection.

Tools Menu

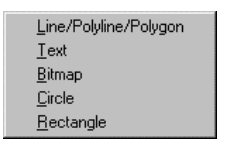
The Tools pull-down menu allows selecting Parts (pilot lights, buttons, etc.), Drawing tools (Polyline, Circle, Rectangle, etc.), or the Select tool . All of the Parts and Drawing tools in the tools pull-down menu are available as icons in the Tools pop-up menu box. The Keypad Assignments selection is used with the Keypad option. See the Keypad section for additional information.

Parts

Parts include all the objects shown in the following list.

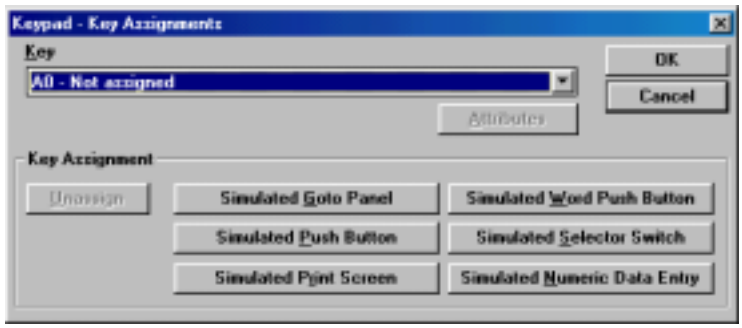
Draw

Draw tools include any tools used to create static pictures. You can use the drawing tools to create a picture of an operation, process, or function. Pictures in BMP format can be added to panels to further enhance the graphic image. Dynamic parts can be added to create a true interactive operator interface.

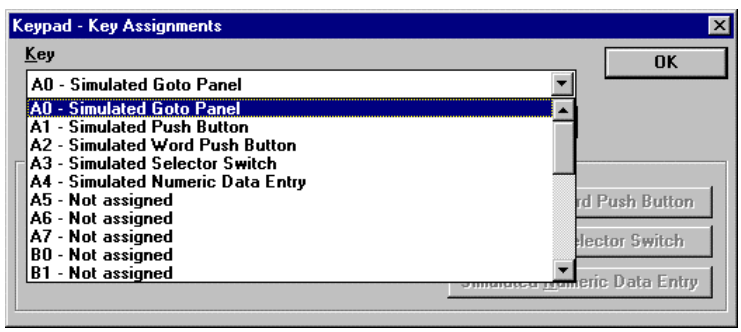


Keypad Assignments

Keypad Assignments is a menu selection used only with the Keypad option. The Keypad Assignment dialog box has a list box for displaying the keypad assignments and a series of buttons for creating simulated operators, such as a simulated push button.



You can view all the keypad assignments by clicking the down arrow in the Key list box. A keypad assignment list similar to the one below will appear. You can change the attributes of any simulated operator by selecting the keypad from the list, then clicking the Attributes button. Note that simulated operators are marked as *Simulated*. To change the attributes of normal operators assigned to keypads, you must use the panel editor and double-click the operator.

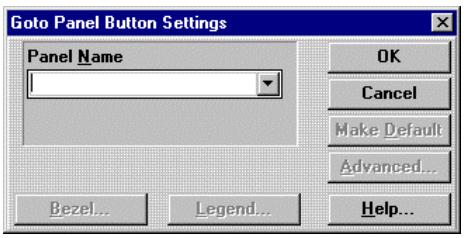

Keypad - Key Assignments
Key
OK
A0 - Simulated Goto Panel
A0 - Simulated Goto Panel
A1 - Simulated Push Button
A2 - Simulated Word Push Button
A3 - Simulated Selector Switch
A4 - Simulated Numeric Data Entry
A5 - Not assigned
A6 - Not assigned
A7 - Not assigned
B0 - Not assigned
B1 - Not assigned

You can assign a keypad to simulate a panel object, even though there is no panel object visible on the screen. You can assign one of the keypads to simulate the following panel operators:

- Push Button
- Goto Panel Button
- Print Button
- Word Button
- Selector Switch
- Numeric Data Entry

The first operation is to select which keypad will be assigned to the simulated panel operator. Click the down arrow in the Key list box then click an unassigned keypad.

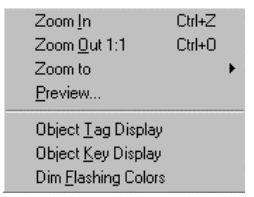
Next, select one of the operators to simulate by clicking a button in the Key Assignment area. When you click one of the simulate keys, the rest of the buttons will be grayed out. Click the Attributes button to display the setup dialog. A simulated Goto Panel dialog box is shown below.



Note that the Bezel, Legend, Make Default and Advanced options are disabled (grayed out). You only have to enter the Panel Name and click the OK button.

When you download the project file to a QuickPanel (with the Keypads option) the keypads can simulate a panel operator. For example, if you press the A0 keypad, which was selected to simulate a Goto Panel, the panel name you selected will be displayed. This is the same operation as the GoTo Panel Button, but without the panel operator taking up screen space.

View Menu



Zoom In

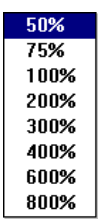
This selection enables the zoom in tool. Click the mouse while the zoom tool is present to zoom to the next level. Click and hold the mouse to draw a box around an area to zoom in. You can also use the zoom in button on the toolbar.

Zoom Out 1:1

Resets the view to a standard 1:1.

Zoom to ...

This option allows selection of several zoom settings.



Preview

The preview mode produces a full-screen image of the panel at a 1:1 viewing ratio. This preview will give you a good idea of what the panel will look like when it is viewed on the target display.

Object Tag Display

You can view the Object Tag by enabling the option in the View menu. The sample drawing shows the tag name displayed in the upper left corner.

Keypad Tag Display

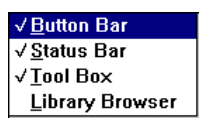
The keypad tag display is similar to the object tag display. The keypad tag operates independently of the object tag display. The keypad tag is displayed in the bottom left corner of the operator and provides a quick visual check to see which panel operators have keypads assigned. The keypad tag will appear with a panel print.

Dim Flashing Colors

When you are creating panels, you have the option of selecting Flashing Colors. Flashing occurs only when the panel has been downloaded to a target display. To see which colors have been selected as Flashing, check the Dim Flashing Colors option in the View menu. Flashing colors will then appear as a different shade, or a dimmed version of the corresponding color.

Options Menu

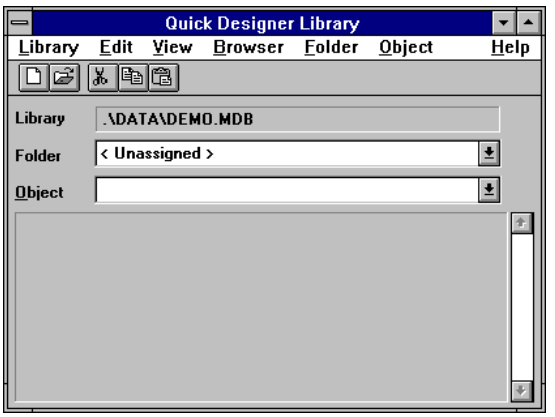
The options menu allows removing or replacing the button bar, status bar or tool box. You can display this menu by clicking the right mouse button when the cursor is outside the panel design area.



See RIGHT MOUSE BUTTON for more information about using the right mouse button to display other menus.

Library Browser

Selecting Library Browser from the Options menu will display the Quick Designer Library window. See Library Tour on page 133 and Library Browser on page 136.

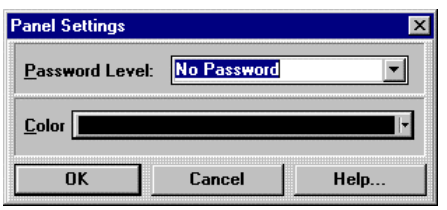


Settings Menu

The Settings menu has three options; Panel Settings for changing the color of the panel, Grid for selecting the grid type, and Preferences for changing object preferences.

Panel Setting

You can change the background color of the *QUICKDESIGNER* panel. The default setting is black. Click on the Color bar to display the color palette.



Password

A panel can be assigned a password level as Operator, Supervisor, or Master. For example, several panels are password protected to allow only authorized personel to change settings. A panel protected with the password level of Operator will allow all of the users with Operator passwords to access the panel. Users with Supervisor and Master passwords may also access the panel. A panel set to Supervisor level will allow access to users with Supervisor and Master passwords, but will not allow access to any users with Operator passwords. A user with a Master password can access any password protected panel.

In the following sample password file, there are three users assigned Operator passwords, two users assigned Supervisor passwords, and one user assigned the Master password.

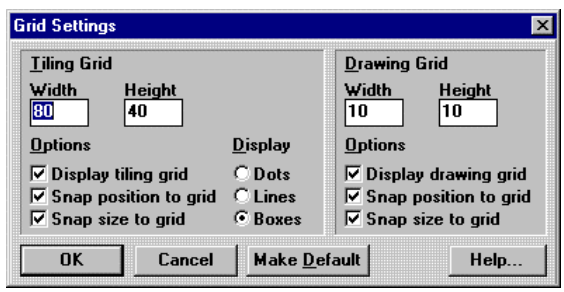
Level	Password	User Name
Operator	12345	Bob
Operator	456	Dave
Operator	7778	Nick
Supervisor	9034	Susan
Supervisor	27752	Chuck
Master	911	Max

To set the password for a single panel, go to the Settings menu and select Panel. The Panel Settings dialog will appear. From the Password Level list box, select No Password, Operator, Supervisor, or Master.

To define the passwords for each password level, you must exit Panel Designer and return to Quick Manager. Click the SETUP button, then click the SYSTEM button. Pressing the Define Passwords button will display the Password Setting dialog box. See Define Password Button on page 40

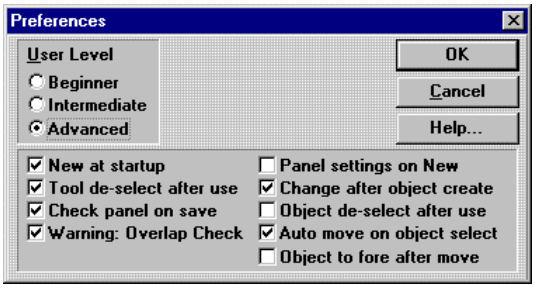
Grid Settings Dialog Box

You can change the size and style of the tiling grid in the Grid Settings dialog box. The tiling grid can be dots, lines, or boxes, and can be turned off. The drawing grid is always dots. The drawing grid can also be turned off. The snap option can be turned off for both the tiling and drawing grids. See Tiling and Drawing Grids on page 104 for more information about grids.



Preferences

The *QUICKDESIGNER* is set up to allow the novice user to quickly design panels. Some of the operations appear automatically, such as deselecting a tool after using it and automatically checking the panel when the file is saved. Some of the automatic operations can be turned off. If you are a beginner, most of the automatic operations are turned on. The intermediate level turns off a few of the automatic operations. The Advanced level allows you to pick the automatic operations you prefer.



Preference Options

New at startup: opens a new panel when *QUICKDESIGNER* starts.

Auto size on create: If checked, the selected object will be a fixed size when created. For example, a push button would be 80 x 80. Otherwise, the size of the selected object will be determined by the grid size settings. Some objects have a minimum size (push buttons are 40 x 40) and cannot be made smaller. Size also depends on whether the "snap size to grid" option in the grid dialog box is checked.

Tool de-select after use: when you are done using an object, the cursor will change to a pointer. If this box is not checked, the cursor remains the same as the last object selected.

Check panel on save: The panel design is checked for errors when SAVE is selected.

Warning: Overlap Check: warns that objects are overlapped on the panel.

Panel settings on New: displays the Panel Settings menu when a New file is started. Allows selection of black or white panels.

Change after object create: When an object is placed on the panel, a dialog box will appear. The dialog box is used to change settings for the object. If the box is not checked, the object is placed on the panel without the dialog box.

Object de-select after use: When you are done working with an object, it remains selected, indicated by a dashed line around it. Checking this box will de-select the object after using it.

Auto move on object select: You can select and move an object by clicking it and holding down the mouse button as you move it.

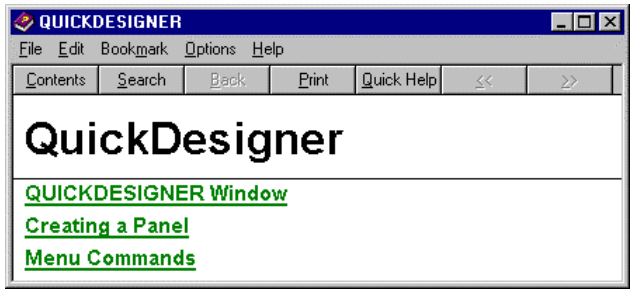
Object to fore after move: Places the object in the foreground after it is moved.

Help

The Help file contains most of the information found in the user manual, except it is in electronic format and in easy reach.

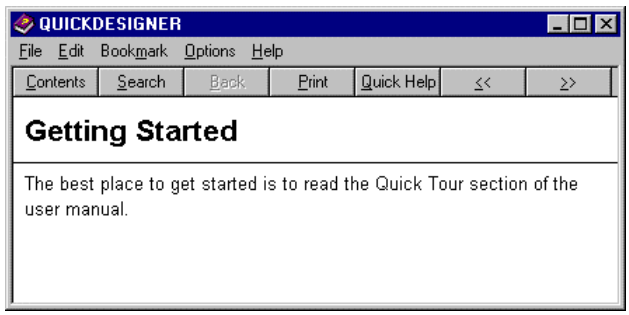
Contents

If you click on Contents, the QuickDesigner help screen is displayed.



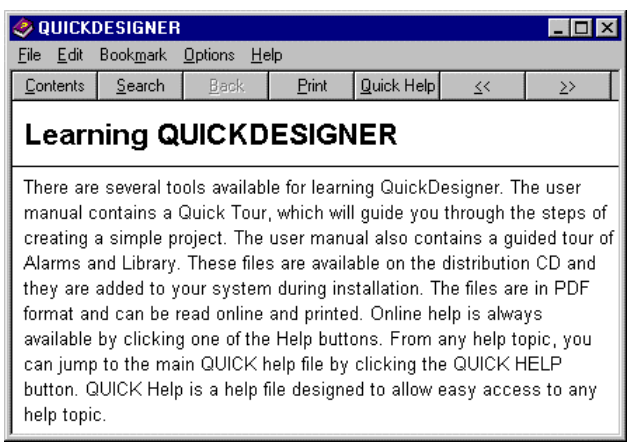
Getting Started

Getting started has been reduced to provide only a message box about the best way to get started using QuickDesigner.


QUICKDESIGNER
File Edit Bookmark Options Help
Contents Search Back Print Quick Help << >>
Getting Started
The best place to get started is to read the Quick Tour section of the user manual.

Learning QUICKDESIGNER

A message box describing the tools available to learn QuickDesigner software.


QUICKDESIGNER
File Edit Bookmark Options Help
Contents Search Back Print Quick Help << >>
Learning QUICKDESIGNER
There are several tools available for learning QuickDesigner. The user manual contains a Quick Tour, which will guide you through the steps of creating a simple project. The user manual also contains a guided tour of Alarms and Library. These files are available on the distribution CD and they are added to your system during installation. The files are in PDF format and can be read online and printed. Online help is always available by clicking one of the Help buttons. From any help topic, you can jump to the main QUICK help file by clicking the QUICK HELP button. QUICK Help is a help file designed to allow easy access to any help topic.

IO Addressing Guide

Clicking the IO Addressing Guide will display the Tag variable table for the PLC protocol selected in Setup. You will also be able to get to the Tag table if you enter an invalid tag name for any panel tool. A Tag Name Error dialog box will appear and remind you that the tag name is invalid. Click the Help button in the Tag Name Error dialog box to display the tag table.

About QUICKDESIGNER

Clicking the About option will display the splash screen for QuickDesigner. This screen will show important information about the software. The 'System Info' button is used to display information about the QuickDesigner software or Windows.

Master Help

Once you enter the help system from any point, you can gain access to any other help topic by clicking the 'Quick Help' button, which will jump to the main Quick Help screen. This main screen has links to all other help topics, inlcuding protocol drivers, alarms, and all panel tools.

Library Tour

Library is a feature that allows storing an object or group of objects in a database. Each library (you can have more than one) contains folders of neatly stored objects and groups of objects.

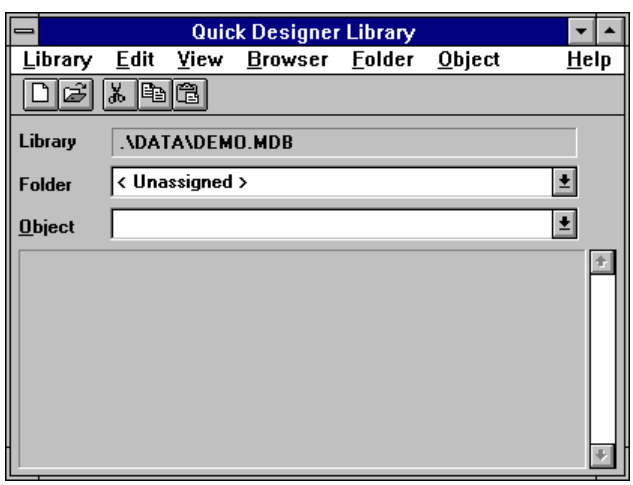
Summary of Features

- Objects and groups of objects can be stored in folders in multiple libraries.
- Drag 'n Drop feature allows fast panel design and saving objects.
- Folders provide for custom design of the database.
- Projects can be quickly built from libraries of objects.

When you create your favorite object, like a pilot light or selector switch, you can save the object in a named library folder. Later, when you want to make a copy of the object, the library feature allows for fast and easy selection and transfer of the object to your panel. You can create templates for panels and store all the objects as one file in a folder. You can design a complete panel and store it in a folder in the library.

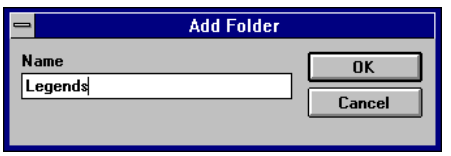
This tour will demonstrate how to create objects and store them in a library.

Create a new project and open QUICKDESIGNER. Select Options and click Library Browser to open Quick Designer Library.



Select New from the Folder menu.

Enter the name of the new folder in the Add Folder dialog box. In this example, the name *Legends* was selected. Click OK when done.

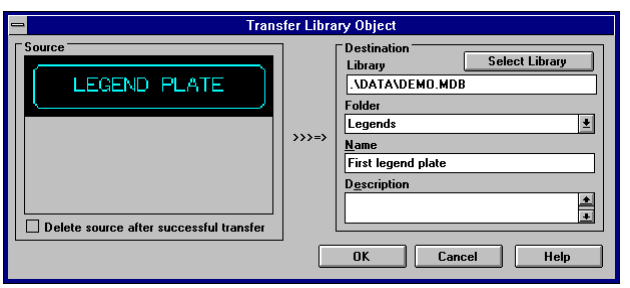


Select Exit from the Library menu to exit the Quick Designer Library.

The first object to create is a legend plate. In this example, all legend plates will have the same appearance but different text. Here is an example of a simple legend plate.

To save the legend plate in a library, click the legend plate to select it, then select Store Library Object from the Edit menu. The Transfer Library Object dialog box appears.

The selected object will be displayed in the Source box on the left side of the dialog box. The right side of the dialog box determines the destination. Select the Legends folder (created earlier) and type in the name of the object. There is an additional text input box for a description of the object. Click OK when done.



The Transfer Library Object dialog box closes and the Quick Designer Library window stays open. Select the Legends folder and the legend plate with a description should appear.

The Library function supports Drag-and-Drop, so that you simply select the object in the library by clicking and holding down the mouse button, then drag the object from the library to the panel. Once the object is on the panel, the setting dialog for that object will appear.

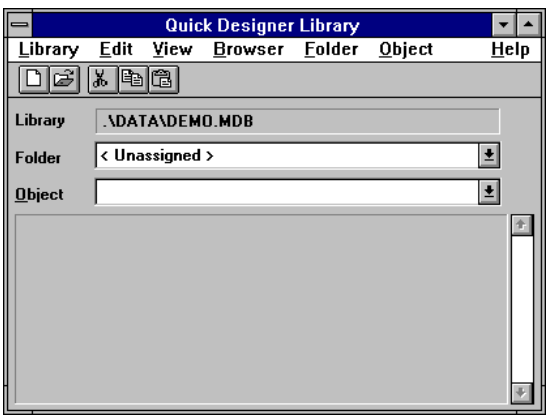
The custom legend plate can be placed on any panel by opening the Library Browser, selecting the folder, then dragging and dropping the desired object.

Quick Designer also supports grouping objects. You can select multiple objects that will act as a single object for moving, sizing, and other editing operations. The grouping can be temporary, as when you select multiple objects with the SHIFT key or by drawing a box around objects with the mouse. Objects that are temporarily grouped can be made permanently grouped by selecting Group Objects from the Edit menu. Grouped objects can also be stored and retrieved in the Library.

Library Browser

Quick Designer Library Window

Selecting Library Browser from the Options menu will display the Quick Designer Library window. The tool bar contains icons for creating new libraries and opening an existing library. There are icons for cut, copy and paste. The window displays the contents of the current folder. You can select a different folder and any item within the folder with drop down list boxes.

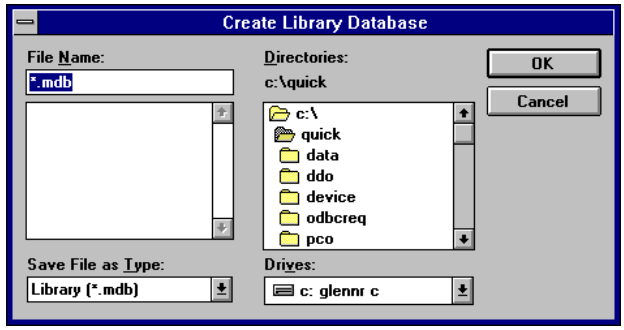


Library

New

Creates a new Library database. Enter the file name and select the destination drive and directory. The default library file name extension is *.mdb. Click OK to complete the operation.

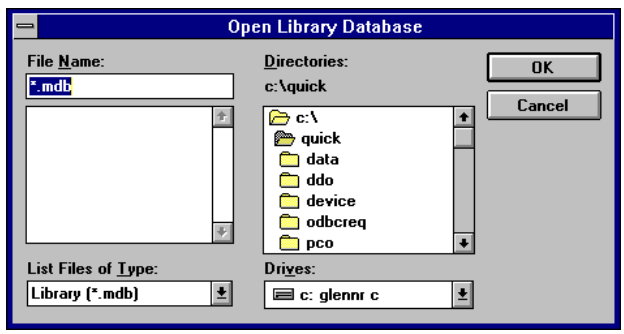
NOTE Long file names are supported, beginning with QuickDesigner version 3.50.



Open

Open a new Library database. Enter the file name and select the destination drive and directory. The default library file name extension is *.mdb. Click OK to complete the operation.

NOTE Long file names are supported, beginning with QuickDesigner version 3.50.



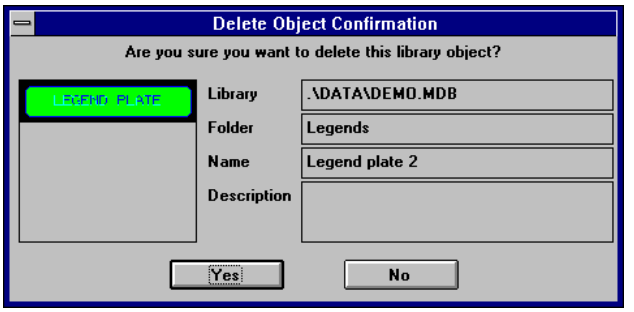
Exit

Close the Quick Designer Library dialog box.

Edit

Cut

Deletes the selected item from the Library. A delete confirmation dialog box appears. Click Yes to delete the object or No to abort the delete operation. There is no UNDO.

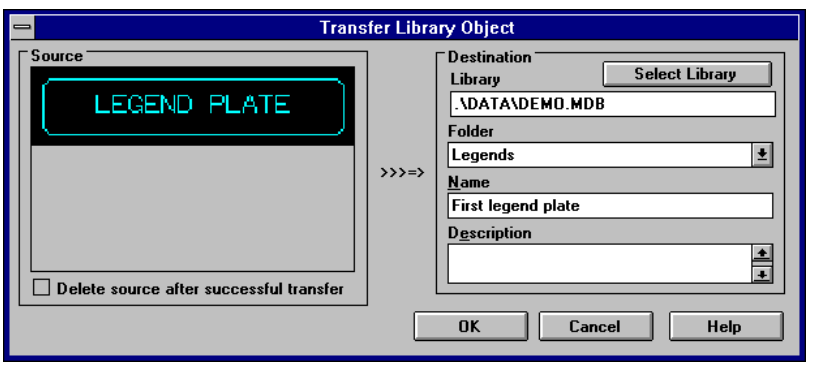


Copy

Copies the selected object to the clipboard.

Paste

Takes the contents of the clipboard and pastes it to a selected library and folder. The Transfer Library Object dialog appears. Select the destination library and folder, enter the name of the object and a description and click OK to complete the transfer.



View

Toolbar

When checked, the toolbar is visible in the dialog box. Unchecking the option removes the toolbar from the window.

Browser Properties

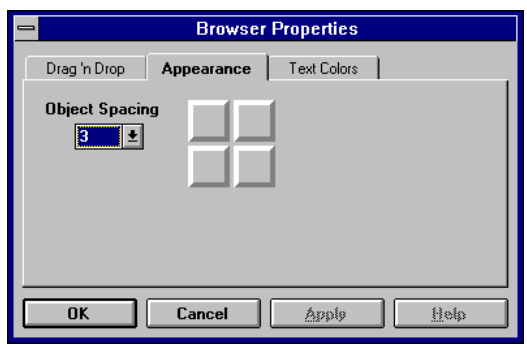
Allows changing the properties of the Library Browser. The properties are arranged in a file box format. The tabs are: Drag 'n Drop, Appearance, and Text Colors.

Drag 'n Drop

You can disable the Drag 'n Drop feature by unchecking the box. When an object is dragged from the library to a panel, the QUICKDESIGNER editor floats to the top. You can disable this feature by clicking No.

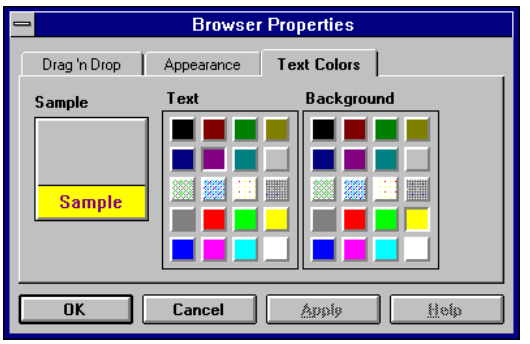
Appearance

You can change the spacing of objects by entering a new value in the selection box. The default setting is 3.



Text Colors

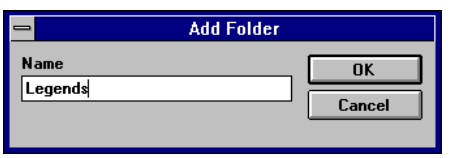
Select the text color and background color for the library objects name.



Folder

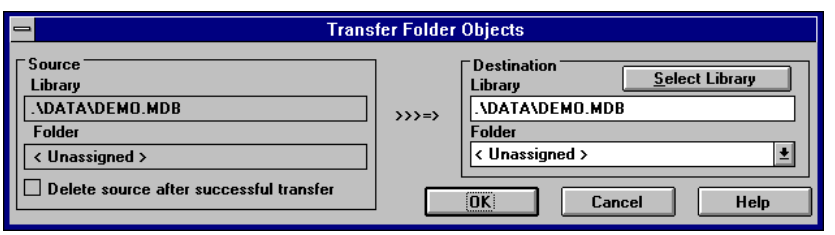
New Folder

Folders provide a convenient way of storing objects that are related in some way. You may want to store all push buttons in a folder, or panels from a project. You can copy objects from one folder to another and copy the entire contents of one folder to another. Enter the folder name and click OK.



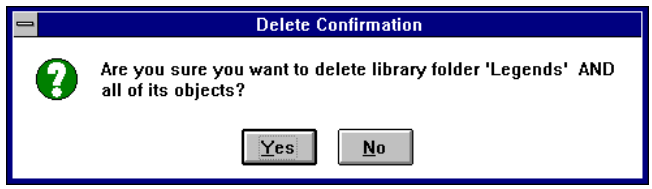
Transfer

Transfer is used to move the contents of the current folder to another. Select the library destination and the folder name and click OK.



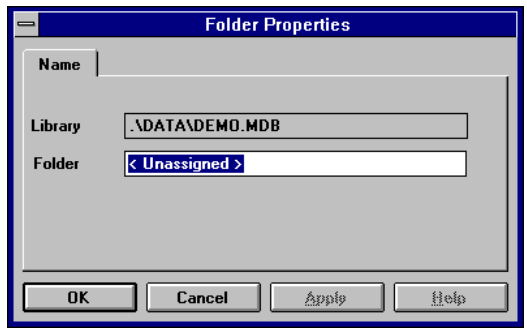
Delete Folder

Deletes the selected folder. A confirmation dialog is presented. Click Yes to delete the folder.



Folder Properties

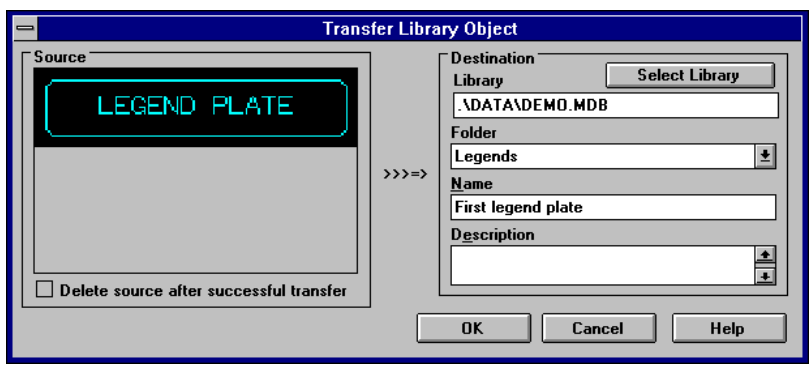
The properties are arranged in a file box format. The name tab allows changing the name of the folder.



Object

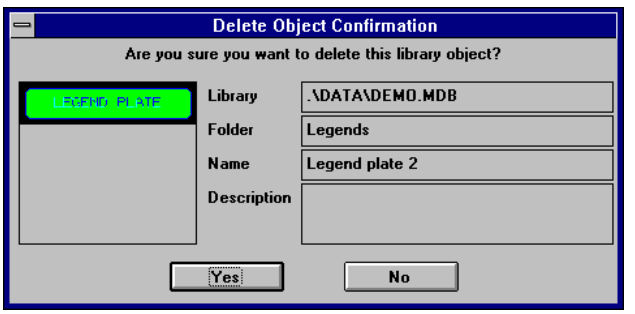
Transfer Object

Moves the selected object to a new destination. Select the destination library and folder, enter the name of the object and a description and click OK to complete the transfer. This is the same operation as an Edit/Paste.



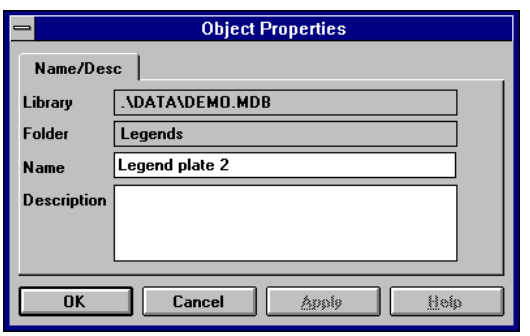
Delete Object

Deletes the selected item from the Library. A delete confirmation dialog box appears. Click Yes to delete the object or No to abort the delete operation. There is no UNDO. This is the same operation as an Edit/Cut.



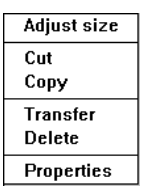
Object Properties

The properties are arranged in a file box format. The Name/Desc tab allows changing the name and description of the object.



Right Mouse Button Options for Objects

Opening a folder in a library will display all objects in the folder. Clicking the right mouse button when the cursor is ON TOP of an object will display the following options menu. The menu is tied to the object directly below the cursor, NOT the selected item.



Adjust Size

Select Adjust Size to display sizing handles on the object below the cursor. Use any of the handles to proportionally size the objects in the folder.

Cut Object

Removes the object below the cursor and places the object on the clipboard. The Delete Object Confirmation dialog box is displayed.

Copy Object

Copies the object below the cursor to the clipboard.

Transfer Object

Transfers the object below the cursor to the selected library and folder. Displays the Transfer Library Object dialog box.

Delete Object

Deletes the object below the cursor from the folder. The object is NOT placed on the clipboard. The Delete Object Confirmation dialog box is displayed.

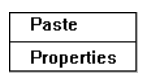
Properties

Displays the Object Properties dialog box.

Right Mouse Button Options for Folders

Browser Properties

Clicking the right mouse button when the cursor is located in the gray area of the object window will display the following options menu. If you had placed an object on the clipboard, the Paste option will be active. (Inactive menu selections are greyed out). Paste will copy the object on the clipboard to the open folder. Selecting Properties will display the Browser Properties dialog box.

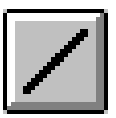


Polyline Tool

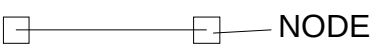
Creating a Polyline Drawing

The polyline tool is used to draw single line segments, multiple line segments, and filled/unfilled polygons.

Click the polyline icon on the tool bar.

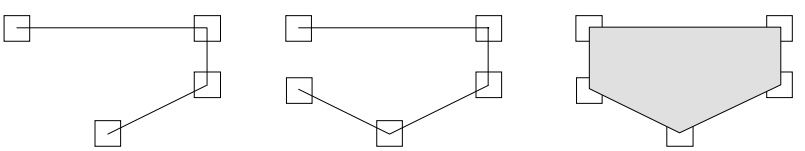


To create a line segment, move the cross hair to the point where you want to begin drawing a line. Click and HOLD the left mouse button. Move the mouse so that the cross hair is now at the second point of the line. Release the left mouse button to complete the line. A small box appears on each end of the line. This small box is called a NODE.



Note that the polyline tool is still active and you can continue to draw additional line segments or add segments to existing lines. You can add segments to existing lines ONLY when the nodes are visible. To add additional segments to the line shown above, move the cross hair over a node, click and hold the left mouse button, move the cursor to a new point and release the mouse button.

You can continue to add line segments to create a polygon. A true polygon is a closed figure bounded by three or more sides. The last leg of a polygon must connect to the node of the first leg so that the figure is closed. The drawing shows the sequence of adding segments to create a filled polygon.



To exit the polyline drawing mode, click on the pointer tool.

Moving a Polyline Object

To move a polyline object, point to the object, then click and hold the left mouse button. The object nodes will appear. Move the object to a new location and release the mouse button. This method of moving polyline objects is the same for all objects. You can also move an object when the sizing handles are visible by moving the cursor inside the object so that crossed arrows appear. Click and hold the left mouse button, then move the object to a new location and release the mouse button.

Editing Nodes

When you click on a polyline object, the object nodes will appear. To move a node, move the cross hair over a node, then click and hold the left mouse button. Move the node to a new location and release the mouse button.

To display the node edit menu, move the cross hair over a node, then and click and hold the RIGHT mouse button. Click a menu item to execute the function.

Insert mode adds a node between the current node and the next node in a counter clockwise direction.

Append mode adds a node between the current node and the next node in a clockwise direction.

Delete mode removes the selected node.

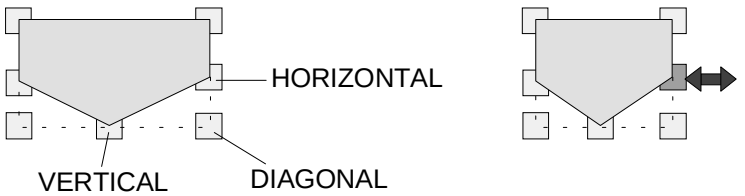
Open polygon removes the line segment between the current node and the next node in a clockwise direction. Removing a segment from a polygon converts it to a polyline. This menu option appears when you select a polygon and changes to *Close polygon* when you are working with a polyline.

Close polygon adds a line segment between the ends of a continuous polyline to form a polygon. This menu option appears when you select a polyline and changes to *Open polygon* when you are working with a polygon.

About Tool is an information box about the polyline tool.

Sizing a Polyline Object

To select the entire object for sizing, click on the object to select it, then click on it again to change from the editing mode to the sizing mode. The sizing handles should appear around the object. If you click too fast, you will get the Line/Polyline/Polygon Settings dialog box. To size an object, select one of the sizing handles and observe the pointer changes into a double end arrow. Click and hold the left mouse button and adjust the size. Sizing handles on the corners are for diagonal sizing. Handles between the corners are for horizontal and vertical sizing. The drawing shows an object resized in the horizontal direction.

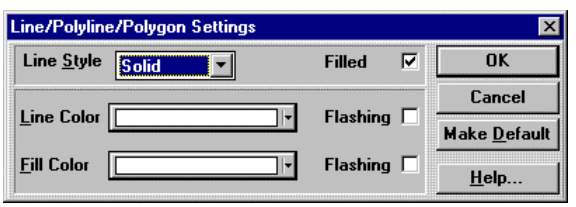


Cautions

When creating a polygon, be careful drawing when the grid is set to snap. The cursor will attempt to snap to the nearest grid point on the drawing grid. The mouse cursor may be in a different location when you start to create the next line. This will cause problems if you attempt to make a polygon. Make sure you draw lines from grid point to grid point, or turn off the snap to grid feature.

Polyline Settings

The dialog box allows changing the line style and color, selecting filled or unfilled polygons, and selecting the polygon fill color. To display the settings dialog, double click on the polyline object. If you double click too slow, you will only display the sizing handles.



Line Style

Solid, dashed, dotted, dash-dot, dash-dot-dot, none.

Filled/Unfilled

Check the *Filled* box to fill the polygon with color.

Line Color

Select the color of the polyline and polygon outline. See Appendix D for Color Information.

Fill Color

Select the color for the inside of the polygon. See Appendix D for Color Information.

OK

Click the OK button to apply the information in the settings menu and close the menu.

Cancel

Cancel all changes to the Line/Polyline/Polygon Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all Line/Polyline/Polygon objects appear the same way, you can click the Make Default button in the Line/Polyline/Polygon Settings menu. The current settings in the Line/Polyline/Polygon Settings menu will be saved. The next time you create a Line/Polyline/Polygon, the saved settings will automatically be applied.

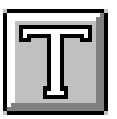
Help

Click the Help button to gain access to help files relating to Line/Polyline/Polygon Settings.

Text Tool

Creating Text

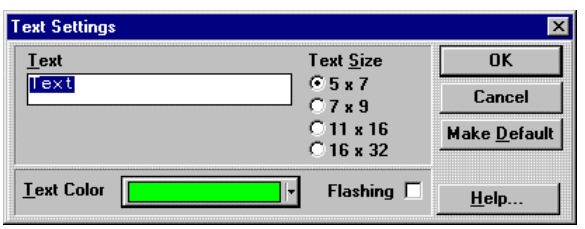
The text tool is used to add text to a panel. Click the text icon on the tool bar.



To add text, move the cross hair cursor to the desired cell and click the left mouse button. The Text Settings dialog box appears. The Text Settings dialog box can also be displayed by double clicking the text.

Text Settings

The dialog box allows changing the text and the text size and color. Text is available in several sizes. Text characters **cannot** be sized like other objects.



Text

Enter the text you want to appear in the Text display.

Text Color

Select the color of the text. See Appendix D for Color Information.

Text Size

Select the size of the text characters.

OK

Click the OK button to apply the information in the settings menu and close the menu.

Cancel

Cancel all changes to the Text Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all Text objects appear the same way, you can click the Make Default button in the Text Settings menu. The current settings in the Text Settings menu will be saved. The next time you create Text, the saved settings will automatically be applied.

Help

Click the Help button to gain access to help files relating to Text Settings.

Moving Text

To move text, move the cursor over the text, click and hold the left mouse button, and move the text to the desired location. Text will snap to grid positions like other objects. For fine placement of text, turn of the tiling snap to grid option.

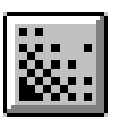
Bitmap

Creating a Bitmap

The bitmap tool is used to place a bitmap image on a panel. The bitmap can be created using Windows ™ Paintbrush or imported from another bitmap source. The bitmap becomes a static image on the panel. The following picture is a sample bitmap.

NOTE Only *.bmp files can be imported into QuickDesigner

Click the bitmap icon on the tool bar.



Move the cross hair to the cell where you want the bitmap to appear and click the mouse. If you want to size the bitmap immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the bitmap. Release the mouse button and the bitmap is sized.

An empty bitmap frame, similar to the picture below will appear.

The bitmap dialog box will appear next to the bitmap frame. The selections allow you to determine how the bitmap will be placed in the empty frame. The default settings place the bitmap at the top, left corner of the frame. Selecting the 'Stretch fit' option will automatically size the bitmap to the empty frame.

Horizontal Justify

Select Left, Center, or Right to justify the bitmap to the frame. The default setting is Left justify, which forces the bitmap to the left side of the frame.

Vertical Justify

Select Top, Center, or Bottom to justify the bitmap to the frame. The default setting is Top, which forces the bitmap to the top of the frame.

Options

To stretch the bitmap to fit the frame size, click the Stretch fit checkbox. The screen size is 320 x 240 for 5" displays, 640 x 400 for 9" displays, 640 x 480 for 10.5" displays and 800 x 600 for 12.1" displays. Bitmaps that exceed the screen size can be displayed by clicking the Stretch fit checkbox.

Bitmap Statistics

The statistics for each bitmap are presented in the Bitmap Settings dialog box. The statistics include the Width, Height, Colors, and Size. *QUICKDESIGNER* supports up to 256 color bitmaps.

NOTE If you import a 256 color bitmap to a display that supports only 8 colors, the colors will be mapped to the RGB Color map found in Appendix D.

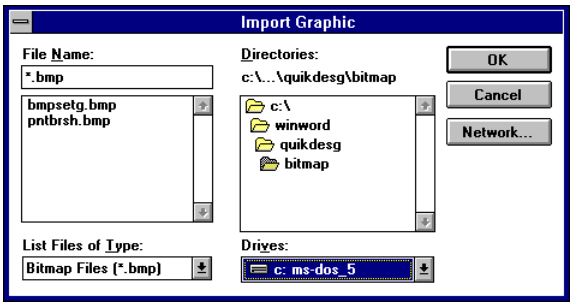
Each object on a panel requires a small amount of memory. The panel can contain any combination of panel objects. Bitmaps that take a lot of memory will limit the number of objects you can place on a panel.

NOTE As bitmaps are enlarged on the panel, more memory is used!

The width of a bitmap must be divisible by 4 for color bitmaps, and divisible by 8 for monochrome bitmaps. If not, QuickPanel will cut off the remaining excess pixels when displaying the bitmap on the panel.

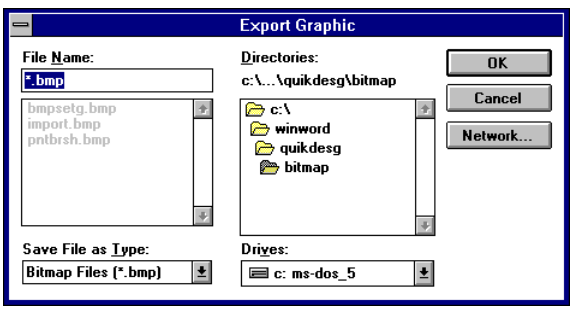
Import

You can import a bitmap image from any program that generates bitmap images. These sources include paint, icon editors, and capture programs. You can import bitmap images from any directory or drive. Click the Import button to display the Import dialog box.



Export

You can export a bitmap image from a panel to any directory or drive. Click the Export button to display the Export dialog box.



OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the Bitmap Settings dialog box and exit the dialog.

Make Default

If you decide that you want to have all bitmaps appear the same way, you can click the Make Default button in the Bitmap Settings dialog box. The current settings in the Bitmap Settings dialog box will be saved. The next time you create a bitmap, the saved settings will automatically be applied.

Help

Click the Help button to gain access to help files relating to Bitmap Settings.

Bitmap Size

Before you attempt to place a bitmap on a panel, use the following approximations to determine the size of the bitmap.

Monochrome Bitmap: (Width / 8) x Height

Example: 80 x 80 mono bitmap = (80 / 8) x 80 = 800 bytes.

16 Color Bitmap: (Width / 2) x Height

Example: 80 x 80 16 color bitmap = (80 / 2) x 80 = 3200 bytes.

To determine the size of your bitmap, open Paintbrush and select View/Cursor Position. Move the cursor to the corner of the bitmap and note the coordinates. Example, 80, 80. Use the equations above to calculate the approximate size of the bitmap.

Notes

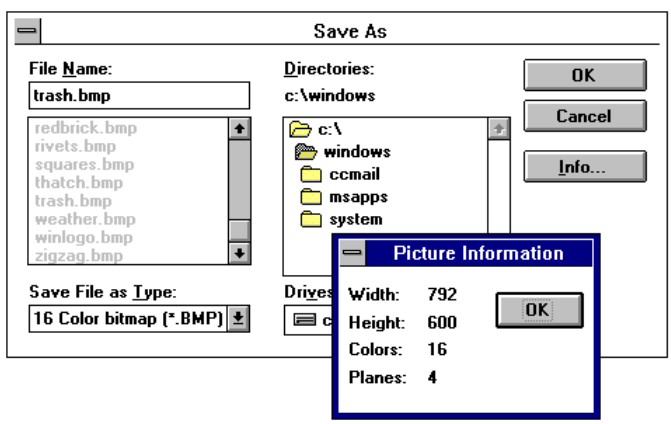
Using bitmap pictures in your *QUICKPANEL* application may require a lot of application memory. As the number and size of bitmap graphics increase in your application, the amount of memory left for other objects will quickly disappear. The amount of memory that a bitmap requires is dependent on its size and type. For example, a monochrome bitmap will require 1/4 the memory of the same sized 16 color bitmap. Also, the draw time of the panel will increase with bitmap usage.

Creating a Bit Map

To create a bitmap, select the bitmap icon and place the object on your panel. The initial size of the bitmap is one cell. When the Bitmap Settings dialog box appears, click the Cancel button. Size the bitmap object to the estimated final size for the panel. Double click on the bitmap to reopen the Bitmap Settings dialog box.

Bitmap Size

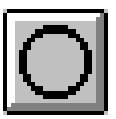
To determine the actual image size of a bit map, load the file into Paintbrush and select the File /Save As option. Click on the Info.. button. It will display the width and height of the bit map. See the example below.



Circle Tool

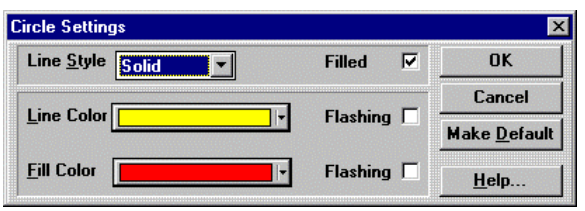
Creating a Circle

The circle tool is used to draw filled or unfilled circles. Click the circle icon on the tool bar.



To create a circle, move the cross hair cursor to the desired cells and click the left mouse button. If you want to size the circle immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the circle. Release the mouse button and the circle is sized. The Circle Settings dialog box appears. The Circle Settings dialog box can also be displayed by double clicking a circle.

The dialog box allows changing the line style and color, selecting filled or unfilled circles, and selecting the circle fill color. The **line style** can be solid, dashed, dotted, dash-dot, dash-dot-dot, and none.

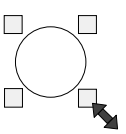


Moving a Circle

To move a circle, move the cursor over the object, click and hold the left mouse button, and move the object to the desired location.

Sizing a Circle

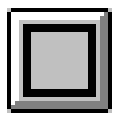
To select an object for sizing, click on the object and sizing handles should appear on the corners. To size an object, move the cursor over one of the sizing handles and observe that the pointer changes into a double end arrow. Click and hold the left mouse button and adjust the size.



Rectangle Tool

Creating a Rectangle

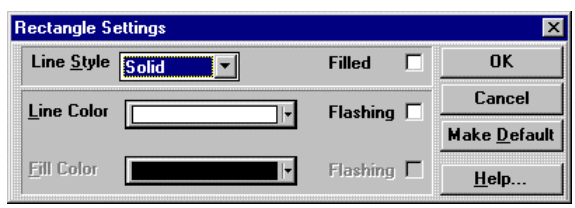
The rectangle tool is used to draw filled or unfilled rectangles. Click the rectangle icon on the tool bar.



To create a rectangle, move the cross hair cursor to the desired cells and click the left mouse button. If you want to size the rectangle immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the rectangle. Release the mouse button and the rectangle is sized. The Rectangle Settings dialog box appears. The Rectangle Settings dialog box can also be displayed by double clicking a rectangle.

Rectangle Settings

The dialog box allows changing the line style and color, selecting filled or unfilled rectangles, and selecting the rectangle fill color.



Line Style

Solid, dashed, dotted, dash-dot, dash-dot-dot, none.

Filled/Unfilled

Check the *Filled* box to fill the rectangle with color.

Line Color

Select the color of the rectangle outline. See Appendix D for Color Information.

Fill Color

Select the color for the inside of the rectangle. See Appendix D for Color Information.

OK

Click the OK button to apply the information in the settings menu and close the menu.

Cancel

Cancel all changes to the Rectangle Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all Rectangle objects appear the same way, you can click the Make Default button in the Rectangle Settings dialog box. The current settings in the Rectangle Settings dialog box will be saved. The next time you create a Rectangle, the saved settings will automatically be applied.

Help

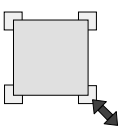
Click the Help button to gain access to help files relating to Rectangle Settings.

Moving a Rectangle

To move a rectangle, move the cursor over the object, click and hold the left mouse button, and move the object to the desired location.

Sizing a Rectangle

To select an object for sizing, click on the object and sizing handles should appear on the corners. To size an object, move the cursor over one of the sizing handles and observe that the pointer changes into a double end arrow. Click and hold the left mouse button and adjust the size.

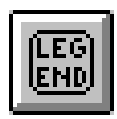


Legend Plate

Creating a Legend Plate

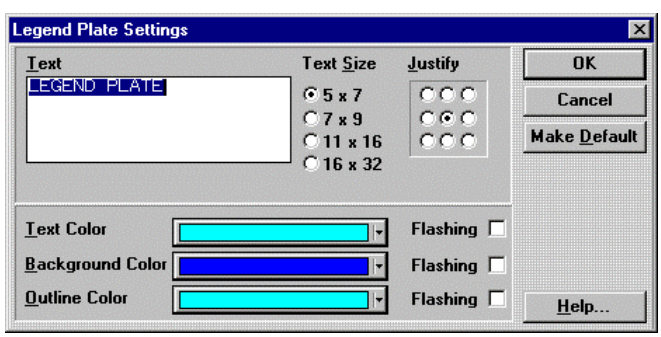
A legend plate is a core component that can be placed on the target display to supply text information to the operator. No variables are monitored or controlled by a legend plate. Note the shape of the legend plate symbol.

Click the legend plate icon on the tool bar.



Move the cross hair to the top of the two cells where you want the legend plate to appear and click the mouse. If you want to size the legend plate immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the legend plate. Release the mouse button and the legend plate is sized.

The following legend plate dialog box will appear.



The legend plate allows you to provide text information to the operator. The legend plate differs from the text tool in that the legend plate allows multiple lines of text and options for outline and background color. The justify radio buttons justify text to any area of the legend plate.

OK

Click the OK button to apply the information in the settings dialog box and close it.

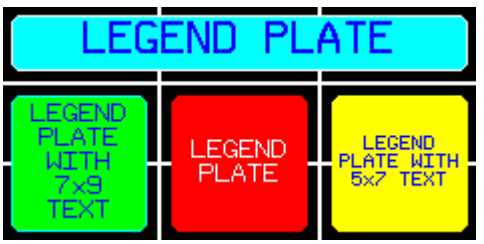
Cancel

Cancel all changes to the Legend Plate Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all legend plates appear the same way, you can click the Make Default button in the Legend Plate Settings dialog box. The current settings in the Legend Plate Settings dialog box will be saved. The next time you create a legend plate, the saved settings will automatically be applied.

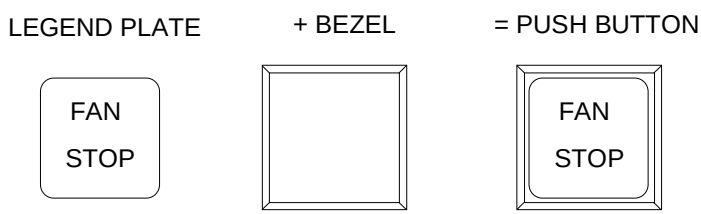
Examples



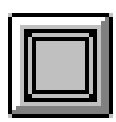
Push Button

Creating a push button

Pressing a push button performs a write operation on a PLC variable. On a standard push button, the bezel changes color to indicate the button has been pressed. The push button action can be selected as Momentary, ON, OFF, or Toggle. The four button styles are standard, circular, simple and none (no bezel or lens). A standard push button is shown below.

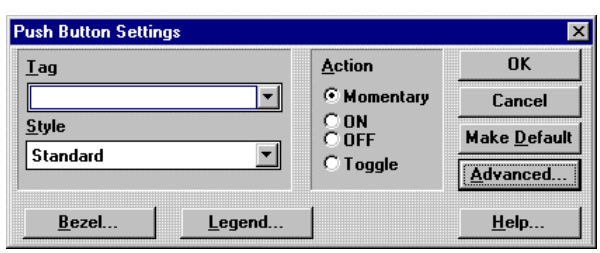


Click the push button icon on the Tools menu.



Move the cross hair to the top of the two cells where you want the push button to appear and click the mouse. If you want to size the push button immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the push button. Release the mouse button and the push button is sized.

The following Push Button Settings dialog box will appear. The Bezel and Legend buttons will display additional dialog boxes.



Tag Variable

The Tag is a single discrete bit in the PLC memory that the target display can control. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

Action

The manner in which the tag variable will be controlled is defined by selecting an "Action". The most common action is Momentary, where the bit is turned ON when the push button is pressed and turned OFF when the push button is released. The ON selection will turn the bit ON when the push button is pressed and no action is taken when the push button is released. The OFF selection will turn the bit OFF when the push button is pressed and no action is taken when the push button is released. Toggle is used to change the bit to the opposite state when the push button is pressed and no action is taken when the push button is released.

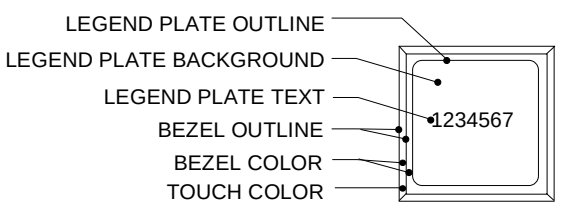
Use caution when implementing the Momentary push button for critical applications such as ramping a motor. Pressing the button sets a bit and releasing the button clears the bit. If at any time during the press and release cycle a communication fault occurs, the bit clear action may not occur. Instead of relying on a bit set or clear, use multiple Word buttons to increment and decrement a counter.

Style

The style list box is used to select the style of the push button. Select Standard, Circular, Simple or None.

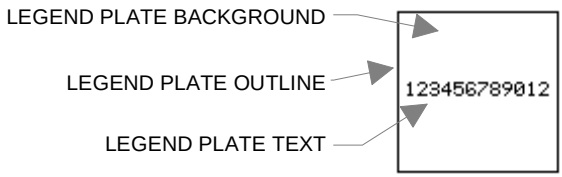
Standard Push Button

The elements of the standard push button are shown below. The standard push button consists of a bezel and legend plate. The bezel is the frame around the legend plate. The bezel can be one color when the button is idle and a different color when the button is touched. The bezel color, the touch color and the bezel outline color can be changed. The legend plate contains the text and the background. The text color, legend plate background color and legend plate outline colors can be changed. There are three text sizes available.



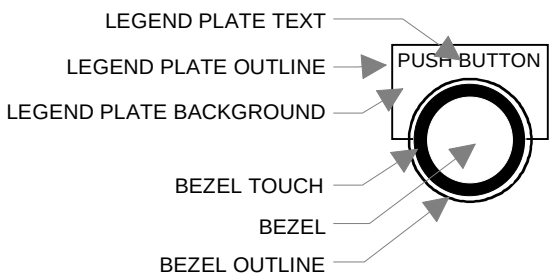
Simple Push Button

The elements of the simple push button are shown below. The simple push button is similar to the standard push button except it has no bezel. The simple push button is a legend plate and text. The text color, legend plate background color and legend plate outline colors can be changed. There are three text sizes available. The simple push button has more room for text characters than the standard push button.



Circular Push Button

The elements of the circular push button are shown below. The circular push button consists of a bezel and legend plate. The bezel is the circular section in the center of the button. The ring around the bezel is the touch indicator. The touch indicator can be one color when the button is idle and a different color when the button is touched. The bezel color, the touch color and the bezel outline color can be changed. The legend plate contains the text and the background. The text color, legend plate background color and legend plate outline colors can be changed. There are three text sizes available.



None Push Button

The None style push button has no bezel or legend plate, which makes it invisible on the panel. When you select the None style, both the Bezel and Legend buttons are greyed out.

Bezel

The simple push button has no bezel so the bezel dialog box should be ignored.

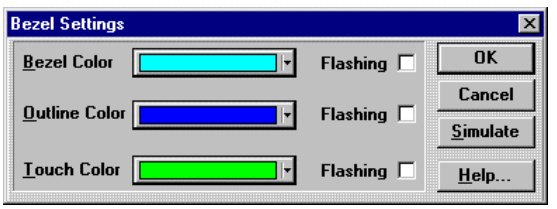
The bezel on a standard push button serves both as a bezel indicator and a touch indicator. When using a standard push button, the bezel portion of the push button can change color when the button is pressed.

A circular push button has a separate bezel and touch indicator. The bezel on a circular push button is the center area of the button. The ring around the center is the touch indicator.

The bezel, outline, and touch color can be modified to enhance the visual impact of the push button. The outline color remains constant whether the push button is pressed or not.

Press the Simulate button to observe the action of the bezel color change.

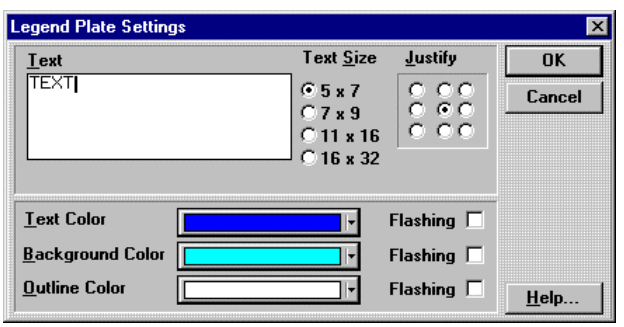
See Appendix D for Color Information.



Legend Plate

The legend plate allows you to provide text information to the operator on the action that will occur when the push button is pressed . This text is constant and will not change when the push button is pressed. The justify radio buttons justify text to any area of the legend plate. The text color, background color, and outline color can be modified in appearance to enhance the application. There is more room for text on a simple push button than on a standard push button.

See Appendix D for Color Information.



OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the Push Button Settings dialog box and exit the dialog box.

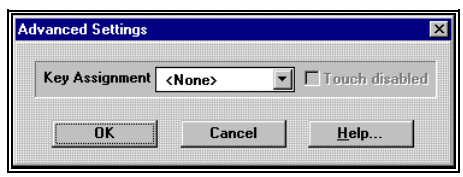
Make Default

If you decide that you want to have all push buttons appear the same way, you can click the Make Default button in the Push Button Settings dialog box. The current settings in the Push Button Settings dialog box will be saved. The next time you create a push button, the saved settings will automatically be applied.

Advanced Button

NOTE The Advanced Button is enabled when you select Keyboard Attached in the Touch Screen Configuration dialog in Setup.

Clicking the Advanced button will display the Advanced Settings Dialog box. The Push Button operation can be assigned to an external keypad. See Keypads, page 262 and Keypad Assignment, page 125, for additional information. Once a keypad is assigned, you can disable the touch screen by checking the *Touch disable* box. If you leave the touch disable box unchecked, then the touch screen and the keypad can both operate the push button.



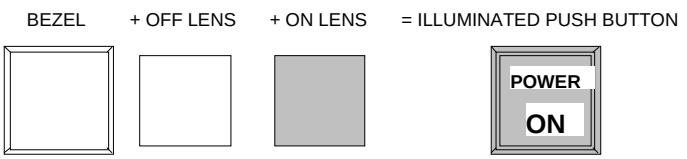
Help

Click the Help button to gain access to help files relating to Push Button Settings.

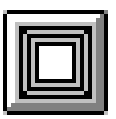
Illuminated Push Button

Creating an Illuminated Push Button

An illuminated push button consists of a bezel, an OFF lens, and an ON lens. The illuminated push button requires two PLC variables; one for the lens and one for the push button. The push button action can be selected as momentary, ON, OFF, or toggle.

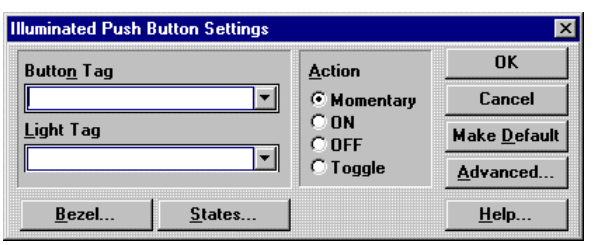


Click the illuminated push-button icon on the Tools menu.



Move the cross hair to the top of the two cells where you want the illuminated push button to appear and click the mouse. If you want to size the illuminated push button immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the illuminated push button. Release the mouse button and the illuminated push button is sized.

The following Illuminated Push Button Settings dialog box will appear. The Bezel and States buttons bring up additional dialog boxes. Note also there is a tag setting for the Push Button and one for the Light (lens).



Push Button Tag Variable

A "tag" variable name must be assigned to the push button. This tag will be a single discrete bit in the PLC memory that the target display can control. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

Action

The manner in which this tag will be controlled is defined by selecting an "Action". The most common action is Momentary, where the bit is turned ON when the push button is pressed and turned OFF when the push button is released. The ON selection will turn the bit ON when the push button is pressed and no action is taken when the push button is released. The OFF selection will turn the bit OFF when the push button is pressed and no action is taken when the push button is released. Toggle is used to change the bit to the opposite state when the push button is pressed and no action is taken when the push button is released.

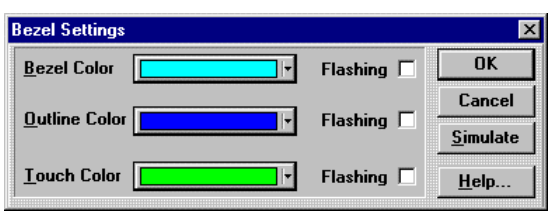
Pilot Light Tag Variable

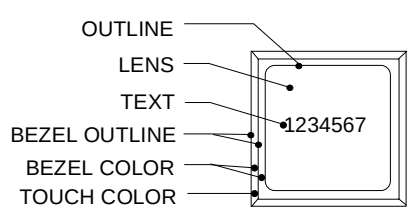
A "tag" variable name must be assigned to the pilot light. This tag will be a single discrete bit in the PLC memory that the *QUICKPANEL* can read. The condition of this bit will determine whether the ON or OFF state is displayed. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

Bezel

The Bezel portion of the push button is used to give a visual indication to the operator that the button was pressed. The bezel, outline, and touch color can be modified to enhance the visual impact of the push button. When the push button is not pressed the bezel color is displayed, but when the push button is pressed the touch color will be displayed. The outline color remains constant whether the push button is pressed or not pressed. Press the Simulate button to observe the action of the bezel color change.

See Appendix D for Color Information.

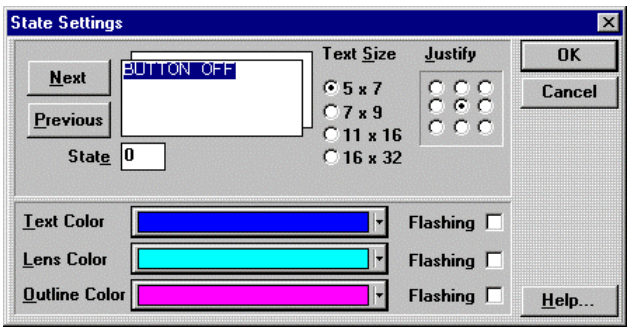


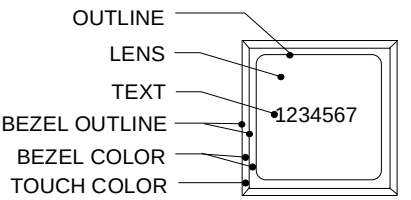


States

The States button will display the State Settings menu. An illuminated push button has two states, ON and OFF. You can change the text size and colors for each state. Click one of the Justify radio buttons to justify text. Use the Next and Previous buttons to select a different state. The last state selected will be the one displayed when you click the OK button.

See Appendix D for Color Information.





OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the Illuminated Push Button Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all push buttons appear the same way, you can click the Make Default button in the Illuminated Push Button Settings dialog box. The current settings in the Illuminated Push Button Settings dialog box will be saved. The next time you create an illuminated push button, the saved settings will automatically be applied.

Advanced Button

NOTE The Advanced Button is enabled when you select Keyboard Attached in the Touch Screen Configuration dialog in Setup.

Clicking the Advanced button will display the Advanced Settings Dialog box. The Illuminated Push Button operation can be assigned to an external keypad. See Keypads, page 262 and Keypad Assignment, page 125, for additional information. Once a keypad is assigned, you can disable the touch screen by checking the *Touch disable* box. If you leave the touch disable box unchecked, then the touch screen and the keypad can both operate the button.

Help

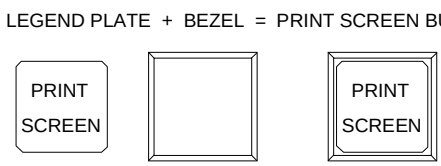
Click the Help button to gain access to help files relating to Push Button Settings.

Print Button

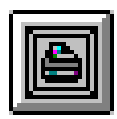
Creating a print button

The print button prints the current panel to a printer attached to the serial (download) or parallel port. For information about hardware connections, see the printer information in Appendix B. The button works like a push button, except that you do not need to set a tag variable. The button is permanently assigned an internal variable that controls printing.

There are three styles of the print button available. The three button styles are standard, circular and simple.

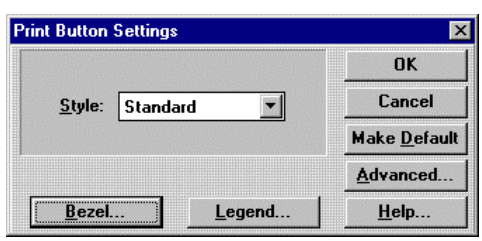


Click the print button icon on the Tools menu.



Move the cross hair to the top of the two cells where you want the print button to appear and click the mouse. If you want to size the print button immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the button. Release the mouse button and the button is sized.

The following Print Button Settings dialog box will appear. The Bezel and Legend buttons will display additional dialog boxes.

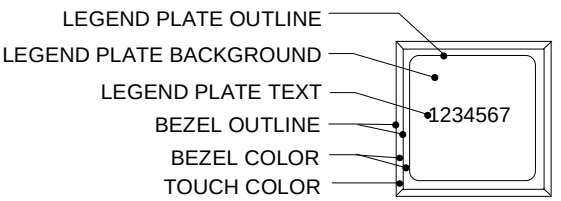


Style

The style list box is used to select the style of the button. Select Standard, Circular or Simple.

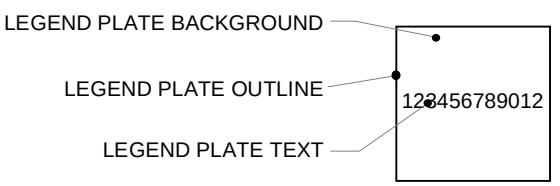
Standard Print Button

The elements of the standard print button are shown below. The standard print button consists of a bezel and legend plate. The bezel is the frame around the legend plate. The bezel can be one color when the button is idle and a different color when the button is touched. The bezel color, the touch color and the bezel outline color can be changed. The legend plate contains the text and the background. The text color, legend plate background color and legend plate outline colors can be changed. There are several text sizes available.



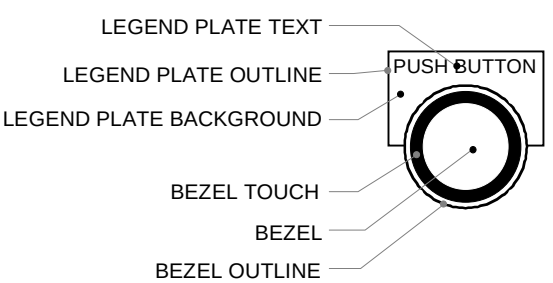
Simple Print Button

The elements of the simple print button are shown below. The simple button is similar to the standard button except it has no bezel. The simple button is a legend plate and text. The text color, legend plate background color and legend plate outline colors can be changed. There are several text sizes available. The simple button has more room for text characters than the standard button.



Circular Print Button

The elements of the circular print button are shown below. The circular button consists of a bezel and legend plate. The bezel is the circular section in the center of the button. The ring around the bezel is the touch indicator. The touch indicator can be one color when the button is idle and a different color when the button is touched. The bezel color, the touch color and the bezel outline color can be changed. The legend plate contains the text and the background. The text color, legend plate background color and legend plate outline colors can be changed. There are several text sizes available.



Bezel

The simple button has no bezel so the bezel dialog box should be ignored.

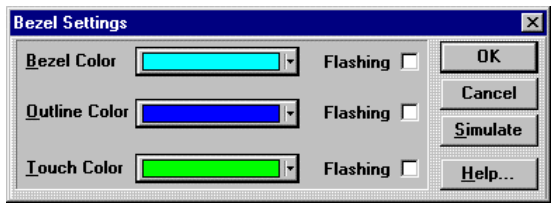
The bezel on a standard button serves both as a bezel indicator and a touch indicator. When using a standard button, the bezel portion of the button can change color when the button is pressed.

A circular button has a separate bezel and touch indicator. The bezel on a circular button is the center area of the button. The ring around the center is the touch indicator.

The bezel, outline, and touch color can be modified to enhance the visual impact of the button. The outline color remains constant whether the button is pressed or not.

Press the Simulate button to observe the action of the bezel color change.

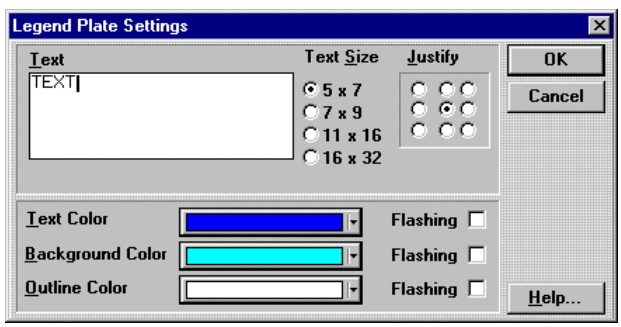
See Appendix D for Color Information.



Legend Plate

The legend plate allows you to provide text information to the operator on the action that will occur when the print screen button is pressed . This text is constant and will not change when the button is pressed. The text size can be changed , and you can justify text by clicking one of the Justify radio buttons. The text color, background color, and outline color can be modified in appearance to enhance the application. There is more room for text on a simple button than on a standard button.

See Appendix D for Color Information.



OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the dialog box and exit the dialog box.

Make Default

If you decide that you want to have all the settings in the dialog box the same way every time the dialog box is opened, you can click the Make Default button. The current settings in the dialog box will be saved. The next time you open the dialog box, the saved settings will automatically be applied.

Advanced Button

NOTE The Advanced Button is enabled when you select Keyboard Attached in the Touch Screen Configuration dialog in Setup.

Clicking the Advanced button will display the Advanced Settings dialog box. The Print Button operation can be assigned to an external keypad. See Keypads, page 262 and Keypad Assignment, page 125, for additional information. Once a keypad is assigned, you can disable the touch screen by checking the *Touch disable* box. If you leave the touch disable box unchecked, then the touch screen and the keypad can both operate the button.

Help

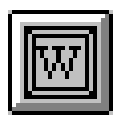
Click the Help button to gain access to help files relating to the associated dialog box.

Word Button

Creating a Word Button

A Word button is a multi-function object that performs Set, Add, Subtract, AND, OR, XOR of a selected value on a PLC word register. For example, if the selected value is 5, then the word button can set a register to the value 5, or add 5 to a register, or subtract 5 from a register. The logical functions of AND, OR and XOR can also be performed using a selected value and a PLC word register.

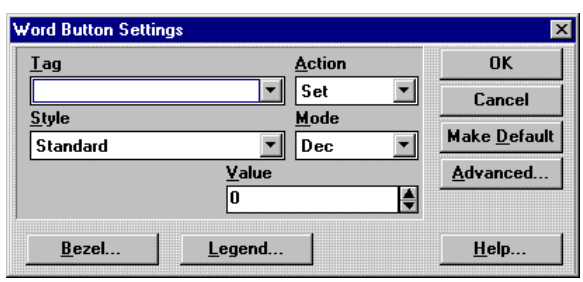
Click the Word button icon on the tool bar.



Move the cross hair to the top of the two cells where you want the word button to appear and click the mouse. If you want to size the word button immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the word button. Release the mouse button and the word button is sized.

The Word button will appear similar to the one below.

The Word button dialog box appears next to the word button.



Tag Variable

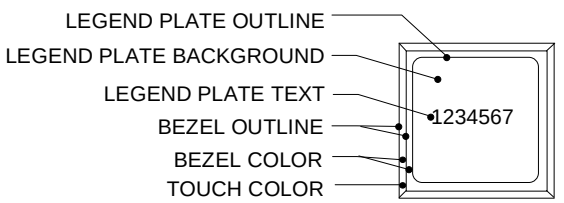
A "tag" variable name must be assigned to the Word Button. This tag will be a word in the PLC memory that the target display can update. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

Style

The style list box is used to select the style of the button. Select Standard, Circular or Simple.

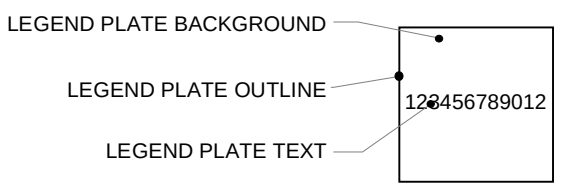
Standard Word Button

The elements of the standard word button are shown below. The standard word button consists of a bezel and legend plate. The bezel is the frame around the legend plate. The bezel can be one color when the button is idle and a different color when the button is touched. The bezel color, the touch color and the bezel outline color can be changed. The legend plate contains the text and the background. The text color, legend plate background color and legend plate outline colors can be changed. There are three text sizes available.



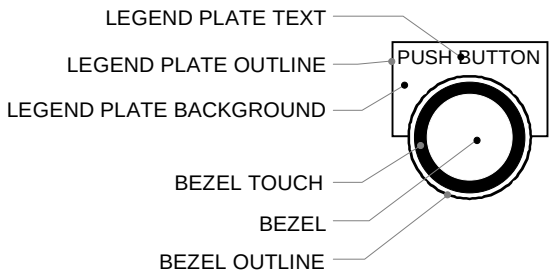
Simple Word Button

The elements of the simple word button are shown below. The simple button is similar to the standard button except it has no bezel. The simple button is a legend plate and text. The text color, legend plate background color and legend plate outline colors can be changed. There are three text sizes available. The simple button has more room for text characters than the standard button.



Circular Word Button

The elements of the circular word button are shown below. The circular button consists of a bezel and legend plate. The bezel is the circular section in the center of the button. The ring around the bezel is the touch indicator. The touch indicator can be one color when the button is idle and a different color when the button is touched. The bezel color, the touch color and the bezel outline color can be changed. The legend plate contains the text and the background. The text color, legend plate background color and legend plate outline colors can be changed. There are three text sizes available.



Action

This pull-down list box is used to select the action to be performed on the PLC word register. The available action options are:

Set: Set the register equal to the number in the Value field.

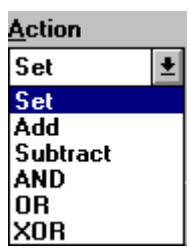
Add: Add the number in the Value field to the PLC word register.

Subtract: Subtract the number in the Value field from the PLC word register.

AND: Perform the logical AND operation between the number in the Value field and the PLC word register.

OR: Perform the logical OR operation between the number in the Value field and the PLC word register.

XOR: Perform the logical XOR operation between the number in the Value field and the PLC word register.



Mode

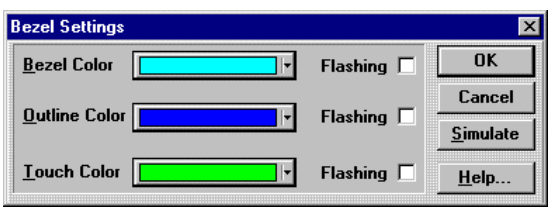
The mode pull-down list box is used to select the number base for the Value field. The default setting is Decimal. The available options are:

Value

This field contains the number value used in the modes of operation. The base number system for the value represented in the field is selected in the Mode list box. You can use the up and down arrows to increment or decrement the value in the field. You can also enter a value directly in the number field by clicking anywhere in the field.

Bezel

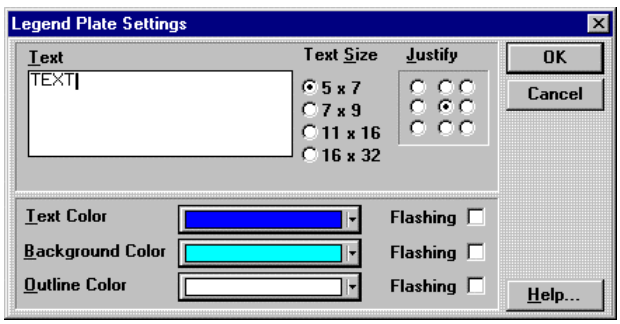
The Bezel portion of the word button is used to give a visual indication to the operator that the button was pressed. The bezel, outline, and touch color can be modified to enhance the visual impact of the word button. When the word button is not pressed the bezel color is displayed, but when the word button is pressed the touch color will be displayed. The outline color remains constant whether the word button is pressed or not pressed. Press the Simulate button to observe the action of the bezel color change. If you load a color project into a monochrome unit, Red, Green and Blue will be converted to Black, and Yellow, Magenta, and Cyan will be converted to white.



Legend Plate

The legend plate allows you to provide text information to the operator on the action that will occur when the word button is pressed . This text is constant and will not change when the word button is pressed. The text size can be changed , and you can justify text by clicking one of the Justify radio buttons. The text color, background color, and outline color can be modified in appearance to enhance the application.

See Appendix D for Color Information.



OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the Word Button Settings dialog box and exit the dialog.

Make Default

If you decide that you want to have all Word Buttons appear the same way, you can click the Make Default button in the Word Button Settings dialog box. The current settings in the Word Button Settings dialog box will be saved. The next time you create a word button, the saved settings will automatically be applied.

Advanced Button

NOTE The Advanced Button is enabled when you select Keyboard Attached in the Touch Screen Configuration dialog in Setup.

Clicking the Advanced button will display the Advanced Settings dialog box. The Word Button operation can be assigned to an external keypad. See Keypads, page 262 and Keypad Assignment, page 125, for additional information. Once a keypad is assigned, you can disable the touch screen by checking the *Touch disable* box. If you leave the touch disable box unchecked, then the touch screen and the keypad can both operate the button.

Help

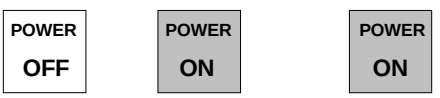
Click the Help button to gain access to help files relating to Word Button Settings.

Pilot Light

Creating a pilot light

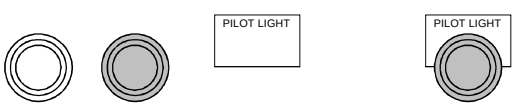
A Pilot Light is an indicator that shows the ON or OFF condition of a variable. The Pilot Light tool allows you to create a square (Standard) or circular pilot light. The standard pilot light consists of two square lens, each with its own color and text options. Each lens can have a different text message.

OFF LENS/TEXT + ON LENS/TEXT = STANDARD PILOT LIGHT



The circular pilot light consists of two round lens and a legend plate. The legend plate contains a text message. The lens can be different colors and the legend text can change in sync with the lens. The legend plate background color and outline colors are selectable but do not change.

OFF LENS + ON LENS + LEGEND PLATE = CIRCULAR PILOT LIGHT

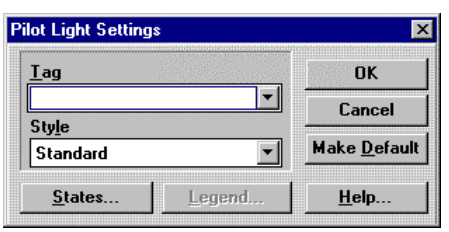


The Pilot Light requires a PLC variable that will be monitored to determine when to display the OFF state and when to display the ON state.

Click the Pilot Light icon on the Tools menu.

Move the cross hair to the top of the two cells where you want the Pilot Light to appear and click the mouse. If you want to size the Pilot Light immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the Pilot Light. Release the mouse button and the Pilot Light is sized.

The following Pilot Light Settings dialog box will appear.

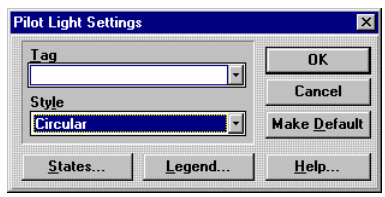


Tag Variable

The Tag is a single discrete bit in the PLC memory that the target display can read to determine the ON/OFF status. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

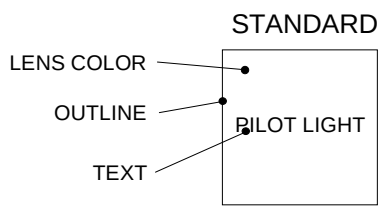
Style

Select either the Standard or Circular style Pilot Light. If you select the Standard pilot light, the Legend button will be greyed out (inactive). If you select the Circular pilot light, both States and Legend buttons will be active.



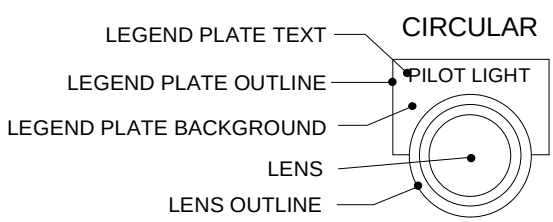
Standard Pilot Light

The elements of the standard pilot light are shown below. The standard pilot light is a square lens with text inside. The lens has two states, either State 0 or State 1. Typically, State 0 is OFF and State 1 is ON. You can select the lens color, outline color, text color and text size for each state. The text can be changed to describe the operation of the pilot light.



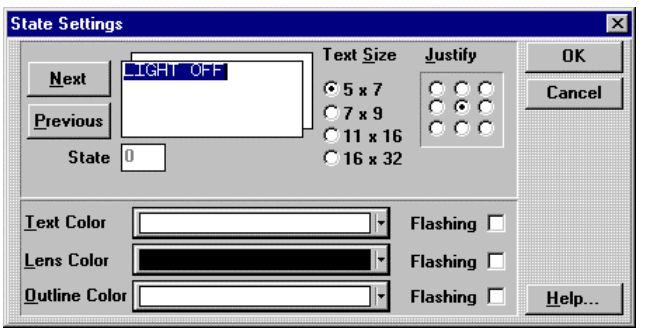
Circular Pilot Light

The elements of the circular pilot light are shown below. The circular pilot light is a combination of a round lens and a legend plate. The lens and legend plate text have two states, either State 0 or State 1. Typically, State 0 is OFF and State 1 is ON. For each state, you can select the lens color, the lens outline color, legend plate text color, and legend plate text size. Although the lens and legend plate text can change color, the legend plate background and legend plate outline colors remain constant.



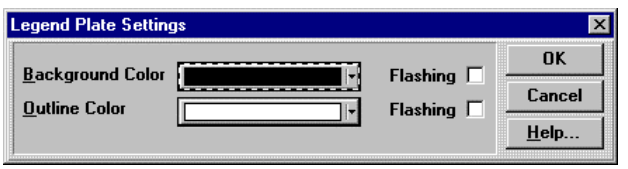
States

The States button will display the State Settings menu. A pilot light has two states, either State 0 or State 1. Typically, State 0 is OFF and State 1 is ON. You can change the text and appearance of each state. Use the Next and Previous buttons to select between State 0 and State 1. Change the text by typing new text in the text box. Select text size by clicking a Text Size radio button. Justify the text by clicking one of the justify buttons. Select a solid or flashing color for the Text, Lens, and Outlines colors. Click OK to apply the settings and return to the setup dialog. The last state selected will be the one displayed when you click the OK button.



Legend Plate

The Legend Plate button is only active for the circular pilot light. Select a solid or flashing color for the Background and Outline colors. The Legend Plate background and outline colors do not change like the lens and text colors. Click OK to apply the settings and return to the setup dialog.



OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the Pilot Light Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all Pilot Lights appear the same way, you can click the Make Default button in the Pilot Light settings dialog box. The current settings in the Pilot Light Settings dialog box will be saved. The next time you create a pilot light, the saved settings will automatically be applied.

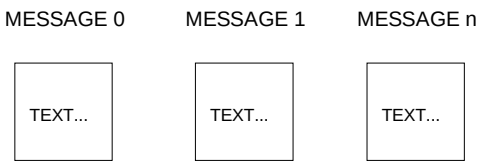
Help

Click the Help button to gain access to help files relating to Pilot Light Settings.

Local Message Display

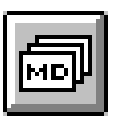
Creating a Local Message Display

A Local Message Display consists of a two or more stacked lenses. Each lens display is a different message. Only one message is visible at a given time. The local message display requires a single PLC variable. The messages can be controlled by a bit variable or word variable.



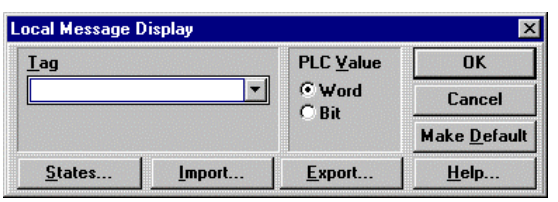
The local message display can be used to show multiple messages or conditions by assigning each message to a variable word or bit. The local message display can be expanded to cover several cells so that the local message display becomes a simple alarm message center.

Click the local message display icon on the Tools menu.



Move the cross hair and local message display image to the top of the two cells where you want the local message display to appear and click the mouse. If you want to size the local message display immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the local message display. Release the mouse button and the local message display is sized.

The following Local Message Display dialog box will appear.

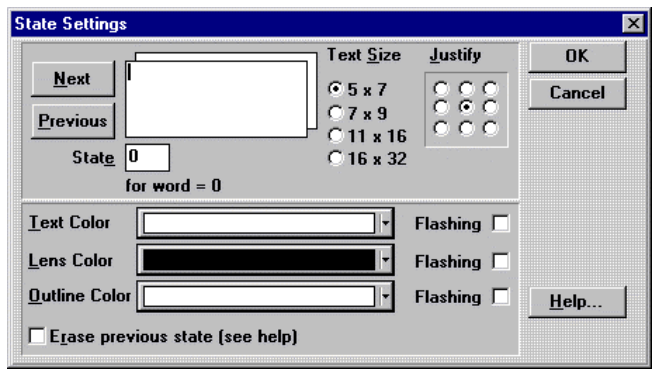


Tag Variable

The Tag is a PLC word variable. You can select whether the word is read as a numeric value (Word) or as discrete Bits (Bit). If you read the variable as a word value, then there will be 255 possible states (0 - 254). When the variable is read as discrete bits, then there are 17 possible states (16 bit positions and 0). When multiple bits are ON, the highest order bit in the ON condition determines the selected state. Enter the tag variable name and click the Word or Bit button. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

States

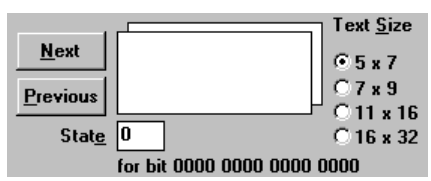
The States button will display the State Settings dialog box. A Local Message Display has two or more states, the maximum number depending on whether you selected the PLC variable as a word or a group of bits. You can change the text size and appearance of each state. You can justify text by clicking one of the Justify radio buttons. Use the NEXT and PREV buttons to select a different state. The last state selected will be the one displayed when you click the OK button.



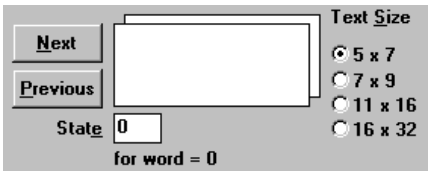
The Erase previous state checkbox is used to compile all empty states into black rectangles with a black outline. When this feature is checked, it will use a lot of panel memory. See the Erase State section for details.

NOTE To make a blank state, enter one or more spaces in the state. States should not be completely empty.

The State Settings dialog box will indicate the current state number and the control condition for that state. The following drawing shows the states are controlled by the PLC Value set to Bit.



If the PLC Value was set to Word, the state dialog box would appear similar to the following.



Erase State

With the Erase previous state feature off (unchecked), only active states are compiled. That is, only states with messages become active states. Active states remain on the display until a new active state is triggered. Here is a chart to show what is appearing on the display.

State	Desired Message	Visible Message
0	Message 1	Message 1
1		Message 1
2	Message 2	Message 2
3		Message 2

Note that when state 1 occurs, Message 1 is still displayed. In some cases, this is not desired. To correct this problem, click the Erase previous state checkbox. This will compile the empty states into black rectangles. Active states will now be removed when an empty state occurs. Now the chart looks like the one below.

State	Desired Message	Visible Message
0	Message 1	Message 1
1		
2	Message 2	Message 2
3		

You can also make a blank state by entering spaces in the state or by entering some text and making it the same color as the lens and outline colors. This method may work for states that are close together, such as states 0 through 10. This method becomes impractical when states are far apart, such as state 100 and 200.

WARNING: The Erase previous state feature is expensive to use. That is why you are warned to see the Help file before using it. Consider the following examples.

Example 1: Erase previous state unchecked. Create two states, 100 and 200. This will compile into two image files, each file approximately 120 bytes. That means it will cost about 240 bytes of panel memory plus 1 panel resource.

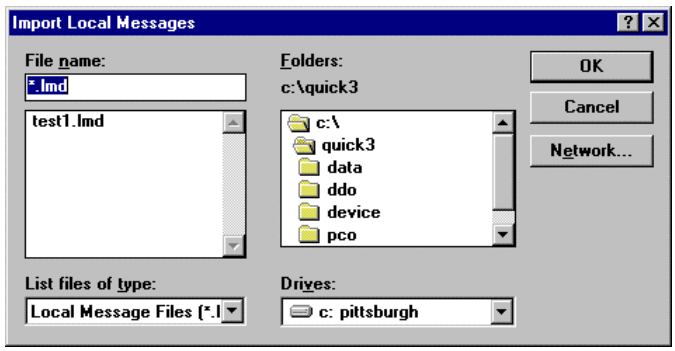
Example 2: Erase previous state checked. All 254 states are compiled. That would be 254 states times 120 bytes! More than 30kb of panel memory!

You have several ways to deal with invalid states appearing on the display.

1. Use the Erase previous state feature. (Uses the most memory)
2. Fill some empty states. (Uses a lot of memory)
3. Design ladder logic to eliminate empty states. (Uses PLC resources)
4. Create a project so invalid states don't matter.

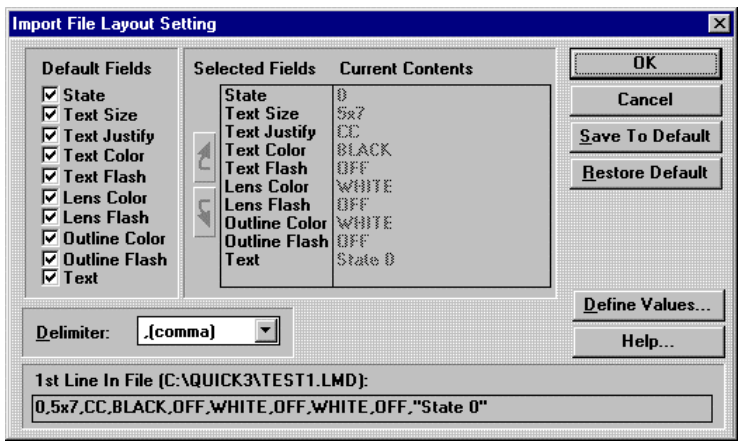
Import

Import Local Message Display files (*.lmd). These files are text files saved with the *.lmd extension. A sample file is shown in the Import Local Messages dialog box. Selecting a file to import will display the Import File Layout Settings dialog box.



Import File Layout Settings

The format and layout of the import files are defined in the Import File Layout Settings dialog. A sample text file is used for illustration.



Sample Text File

The following text file contains all of the default fields. The file is comma separated into fields which correspond to the fields shown in the Import File Layout Settings dialog box. A comma separated file is easy to create but you can use any of the delimiters shown in the Delimiter list box.

```
0,7x9,UL,RED,OFF,CYAN,OFF,RED,OFF,"State 0"
1,7x9,UL,GREEN,OFF,CYAN,OFF,RED,OFF,"State 1"
2,7x9,UL,BLUE,OFF,CYAN,OFF,RED,OFF,"State 2"
```

Default Fields

Select which fields will be specified in the import file format. Fields not specified will be set to the default values shown in the table below. You can change the default values by using the Save to Default button. Use the Restore Default button to reset the default values to the original settings.

Default values are:
Text Size, 5x7
Text Justify, Center
Text Color, White
Text Flash, Off
Lens Color, Black
Lens Flash, Off
Outline Color, White
Outline Flash, Off

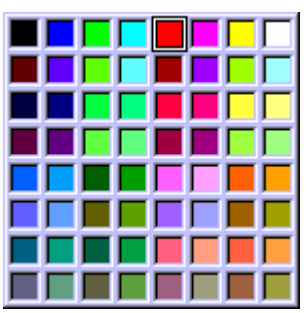
In the following text file, only the STATE and TEXT fields are used. The default values are used where no field is specified.

```
0,"State 0"
1,"State 1"
2,"State 2"
```

Color Selection

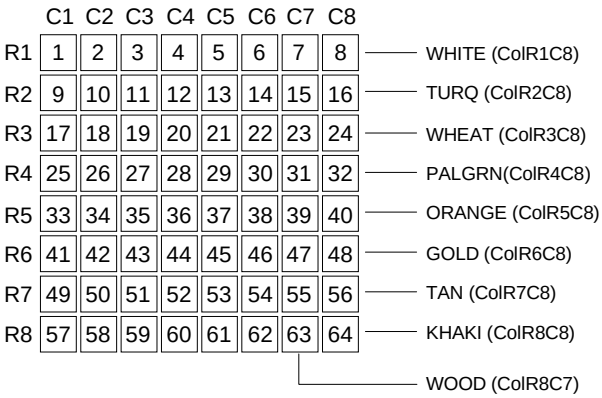
Originally the QuickPanel supported only eight colors (BLACK, RED, GREEN, YELLOW, BLUE, MAGENTA, CYAN, WHITE).

With the addition of the Series 3 QuickPanel, Quick Designer will now support 64 colors. That means when you are using a Series 3 QuickPanel, and you click on one of the color options, a 64-color palette will appear.



Color Index Numbers

The Local Message Display and the Triggered Message Display allow importing and exporting text files that contain color descriptions. Colors can be specified by their color name or by their index number. The index numbers are laid out on a grid that corresponds to the color palette. The index number grid is shown below. The index numbers can be cross-referenced to the 64-Color Grid so you can match Color Index numbers to a Color name.



64-Color Grid

The Color Grid shows the Color Index number and the Color Name. The help files contain sample colors, however, you must have a display capable of showing 64 colors. Color names, other than the original eight, are fixed names for import and export.

The colors in the grid can be referenced in two ways when preparing an import file for a Local Message Display (*.lmd) or a Triggered Message Display (*.tmd).

Use the names shown in the 64-Color Grid.

Use the Row and Column numbers shown in the Color Index Numbers table (ie. BLACK = ColR1C1; KHAKI = ColR8C8)

Color Index	Color Import Name	Color Index	Color Import Name	Color Index	Color Import Name
1	BLACK	23	YEL2	45	PRPL2
2	BLUE	24	WHEAT	46	STLBLU
3	GREEN	25	PLUM	47	DKORNG
4	CYAN	26	DKPURP	48	GOLD
5	RED	27	GRN3	49	BLU5
6	MAGENTA	28	MNTGRN	50	SEAGRN
7	YELLOW	29	DKPINK	51	DKCYAN
8	WHITE	30	MDMAG	52	GRN4
9	DKRED	31	LOLGRN	53	PINK2
10	BLU2	32	PALGRN	54	PLPINK
11	LWNGRN	33	BLU3	55	CORAL
12	CYAN2	34	SKYBLU	56	TAN
13	INDRED	35	FSTGRN	57	SLTBLU
14	PURPLE	36	MDGRN	58	CDTBLU
15	YLWGRN	37	ORCHID	59	DKGRAY
16	TURQ	38	PALMAG	60	GRN5
17	NVYBLU	39	TANGER	61	DKPLMG
18	RYLBLU	40	ORANGE	62	GREY
19	GRN2	41	RCHBLU	63	WOOD
20	SPRGRN	42	BLU4	64	KHAKI
21	RED2	43	DKGOLD		
22	FUSCH	44	OLVGRN		

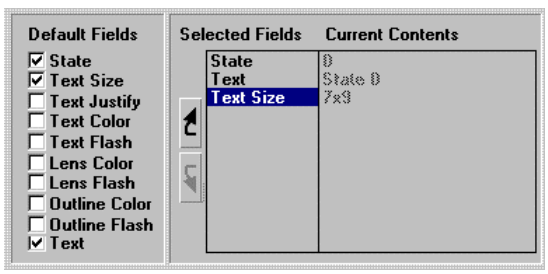
Selected Fields

Each field in the Default Fields section that is checked will appear in the Selected Fields section. You can change the sequence of the fields by clicking a field name, then use the up and down arrows to change its position in the list. In the following example, the State, Text Size, and Text fields are used. However, the Text Size field has been moved to the last position. The text file for the example is shown below.

```
0,"State 0",7x9
1,"State 1",7x9
2,"State 2",7x9
```

Current Contents

The Current Contents section contains the first group of selected fields.



Once you have selected a layout format for the text file, click the Save to Default button. This will save the format for the next time you import a *.lmd file.

Delimiter

A delimiter is a character that separates items in a file. The most common is a comma separated file, similar to the following example.

```
Bears,dogs,cats,lions,sheep,whales,elephants
```

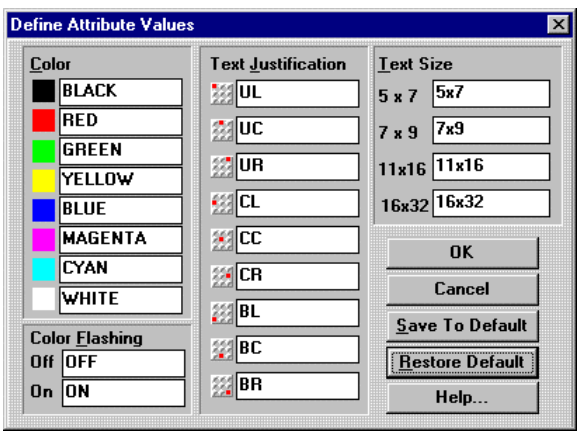
Items can also be separated by Tabs, periods, exclamations, pound, dollar, percent, etc. Items can also be listed in one column with no separators. Design the format of the text file so that it is easy to read and edit.

1st Line in File:

The first line of the imported file is shown in this section. You can use this line to check the layout settings for proper format. The path and file name are listed next to the section title.

Define Values

You can further define the attribute values of the text file by clicking the Define Values button. In the Color section, the basic 8 colors are shown with their common default names. Only the basic 8 colors are supported. You can change BLACK to BK or any other attribute. The 5x7 Text Size can be changed from 5x7 to SMALL. Any attribute changed in this dialog box must match attributes in the text file. That is, you cannot use 5x7 in the text file if you change the attribute to SMALL. The dialog box shows the default settings for the Color, Color Flashing, Text Justification and Text Size attribute values.



Save to Default

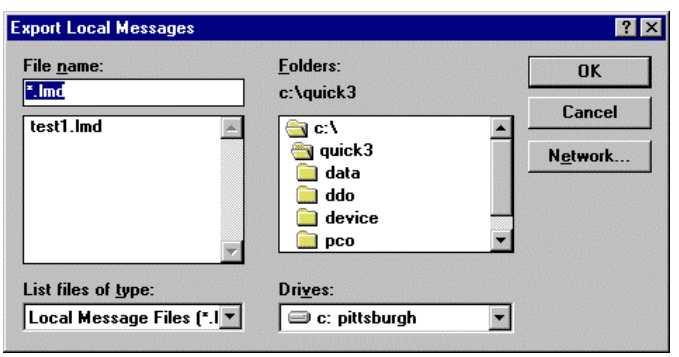
Saves the current selections in the Define Attributes Values dialog box as the new default values.

Restore Default

Changes all selections in the Define Attributes Values dialog box to the default values.

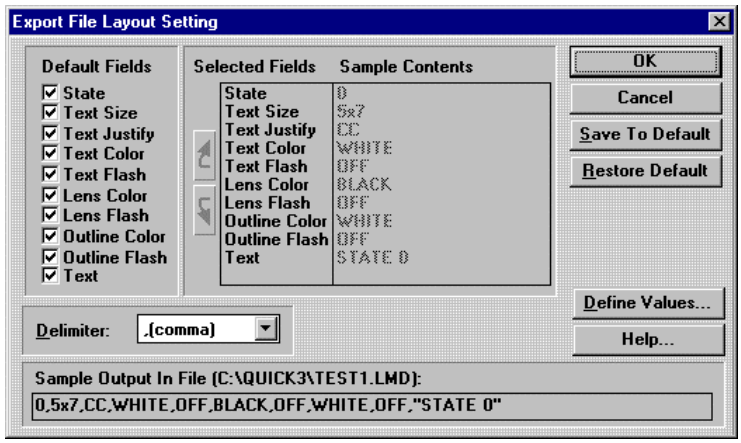
Export

Export Local Message Display files (*.lmd). These files are text files saved with the *.lmd extension. The format and layout of the files are defined in the Export File Layout Settings dialog. When you enter a file name and select a location to export a file, the Export File Layout Setting dialog is displayed.



Export File Layout Setting

The format and layout of the export files are defined in the Export File Layout Settings dialog.



Default Fields

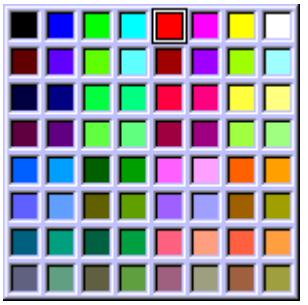
Select which fields will be specified in the export file format. Fields not specified will be set to the default values shown in the table below. You can change the default values by using the Save to Default button. Use the Restore Default button to reset the default values to the original settings.

Default values are:
Text Size, 5x7
Text Justify, Center
Text Color, White
Text Flash, Off
Lens Color, Black
Lens Flash, Off
Outline Color, White
Outline Flash, Off

Color Selection

Originally the QuickPanel supported only eight colors (BLACK, RED, GREEN, YELLOW, BLUE, MAGENTA, CYAN, WHITE).

With the addition of the Series 3 QuickPanel, Quick Designer will now support 64 colors. That means when you are using a Series 3 QuickPanel, and you click on one of the color options, a 64-color palette will appear.



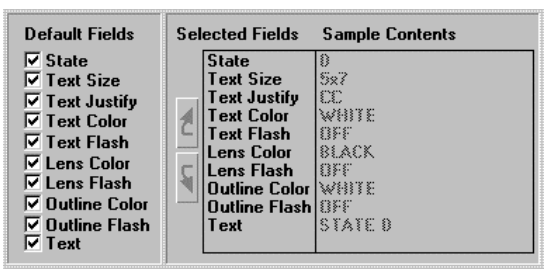
See also the Color Index Numbers and the 64-Color Grid on page 184.

Selected Fields

Each field in the Default Fields section that is checked will appear in the Selected Fields section. You can change the sequence of the fields by clicking a field name, then use the up and down arrows to change its position in the list.

Sample Contents

The Sample Contents section contains a *sample* of what the first group of selected fields might look like.

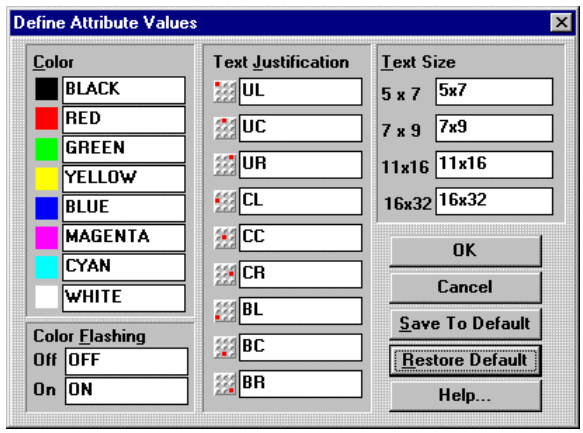


Sample Output in File:

A *sample* output line for the exported file is shown in this section. You can use this line to check the layout settings for proper format. The path and file name are listed next to the section title.

Define Values

You can further define the attribute values of the text file by clicking the Define Values button. In the Color section, the basic 8 colors are shown with their common default names. Only the basic 8 colors are supported. You can change BLACK to BK or any other attribute. The 5x7 Text Size can be changed from 5x7 to SMALL. Any attribute changed in this dialog box must match attributes in the text file. That is, you cannot use 5x7 in the text file if you change the attribute to SMALL. The dialog box shows the default settings for the Color, Color Flashing, Text Justification and Text Size attribute values.



Save To Default

Saves the current selections in the Define Attributes Values dialog box as the new default values.

Restore Default

Changes all selections in the Define Attributes Values dialog box to the default values.

OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the Local Message Display Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all Local Message Displays appear the same way, you can click the Make Default button in the Local Message Display Settings dialog box. The current settings in the Local Message Display Settings dialog box will be saved. The next time you create a Local Message Display, the saved settings will automatically be applied.

Help

Click the Help button to gain access to help files relating to Local Message Display Settings.

Alarms and Prompts

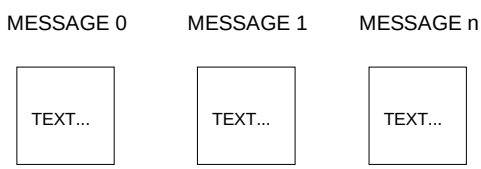
The primary purpose of the Local Message Display is to present simple information messages or operator prompts. The drawing shows a Local Message Display sized to fit across four cells. The display can be sized to fit almost any length message.

NOTE Do not confuse alarm messages in a Local Message Display with alarm messages created by the Alarm tool

Triggered Message Display

Creating a Triggered Message Display

A Triggered Message Display consists of a two or more stacked lenses. Each lens display is a different message. Only one message is visible at a given time. The triggered message display requires one or more PLC bit variables.

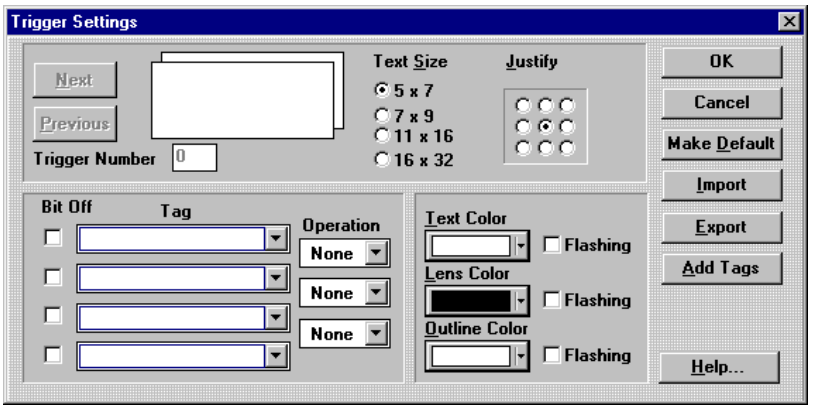


The TMD works by displaying a message based on the status of PLC bit variable(s). For each displayed message, the user can choose to relate up to four Bit variables with three different logic functions (AND, OR, XOR).

Click the triggered message display icon on the Tools menu.

Move the cross hair and triggered message display image to the top of the two cells where you want the triggered message display to appear and click the mouse. If you want to size the triggered message display immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the triggered message display. Release the mouse button and the triggered message display is sized.

The following Triggered Settings dialog box will appear.



Entering a Message

Each message is numbered as shown in the Trigger Number display box. Type the message in the message field. You can change the Text Size by clicking one of the Text Size radio buttons. Justify text by clicking one of the Justify buttons. Select a solid or flashing color for the text, lens, and outline. Note the Next and Previous buttons are greyed out.

Assign one or more Tag variables for each message. If you select two or more bit tags for a message, the tags can have an AND, OR, or XOR logical Operation.

Example: The user may wish a certain message to be shown if Bit0 AND Bit1 OR Bit2 XOR Bit3 is TRUE.

In addition, the user may wish to consider the OFF conditions of bits.

Example: The user may wish a certain message to be shown if Bit0 AND Bit1 OR NOT Bit2 XOR NOT Bit3 is TRUE.

After the tags are entered, click the Add Tags button to enter the tags into the state table. Click the Add Tags button to enter the tags for each message.

If you enter an incomplete state, an error message will appear when you click any of the following buttons: OK, Make Default, Export, Next, Previous.

The TMD will show the given message on the panel screen if (at any time) a logic statement comes true.

Tag Variable

Tag: A "tag" variable name (up to four tags) must be assigned to each message. This tag will be a bit in the PLC memory that the target display can read. After the tags are entered, click the Add Tags button to enter the tags into the state table.

Bit Off: The tag variable can be set to bit off condition for single bits, multiple bits and logical functions.

Operation: For each displayed message, the user can choose to relate up to four Bit variables with three different logic functions (AND, OR, XOR).

Note: For most panel design tools, tags can be edited by clicking the panel object and selecting Change Object Tags (Ctrl+T) from the Edit menu. The Triggered Message Display tool does not support this feature. There are no tag prompts available for the Triggered Message Display.

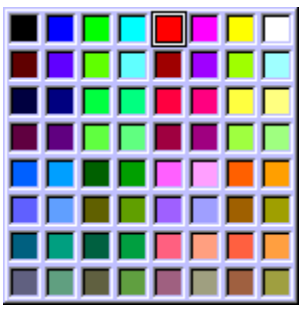
Message Field

The message field is used to enter text for each message contained in the Triggered Message Display. Each message is numbered as shown in the Trigger Number display box. You can change the Text Size by clicking one of the Text Size radio buttons. Justify text by clicking one of the Justify buttons.

Colors

Originally the QuickPanel supported only eight colors (BLACK, RED, GREEN, YELLOW, BLUE, MAGENTA, CYAN, WHITE).

With the addition of the Series 3 QuickPanel, Quick Designer will now support 64 colors. That means when you are using a Series 3 QuickPanel, and you click on one of the color options, a 64-color palette will appear. The palette appears whenever a color selection combo box is clicked inside the QuickDesigner software.



Triggered Message Display Limitations \ Considerations

There are a number of considerations that apply to the TMD that may not be obvious to the user. They are:

At any time, the state of the bits being monitored by the TMD may be such that a number of the TMD states are TRUE. In this case, the first TRUE state will be activated.

If none of the logic states are TRUE, then the TMD will be blank.

Because of the range of memory locations allocated for the TMD, each TMD on the panel allows a maximum of 16 states to be defined.

Because of the range of memory locations allocated for the TMD, a maximum of 16 TMD are available on each panel screen.

Rules Concerning State Parameter Entry

The table below shows all of the invalid settings possible when entering a Logic State into the Triggered Message Display.

	Previous Tag	Bit State	Operation	Next Tag	Valid	Cause of Error
1	0	0	0	1	No	Tag present without previous tag present (missing tag)
2	0	0	1	0	No	Operation present without previous tag (extra operation)
3	0	1	0	0	No	Bit state selected without previous tag (extra bit state)
4	1	0	0	1	No	Tag present without previous operation present (missing operation)
5	1	0	1	0	No	Operation present without next tag present (hanging operation)

Additional Errors:

Message present without Tag0 present (improper message)

State without previous state (missing state)

OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the Trigger Settings dialog box and exit the dialog box.

Make Default

The Make Default button saves a copy of the current TMD in a *.def file, and this copy becomes the default TMD. Each time a new TMD is created, it will have the identical state setup as the one saved to default.

Import

The Import button is used to import the *.tmd text files that contain the logic \ message \ color schemes for the TMD.

The import file must have the *.tmd file extension. Each line of text denotes a defined state for the TMD and contains the following items (in order):

State Number	0 – 16
Text Size	(5x7, 7x9, 11x16, 16x32)
Text Justification	(UL, UC, UR, CL, CC, CR, BL, BC, BR)
Text Color	(See 64-Color Grid)
Text Flash State	(ON, OFF)
Lens Color	(See 64-Color Grid)
Lens Flash State	(ON, OFF)
Outline Color	(See 64-Color Grid)
Outline Flash State	(ON, OFF)
Message text string	Up to 255 characters
First Bit State	(ON, OFF)
First Bit Name	Internal or PLC tag
Operation 1	(AND, OR, XOR)
Second Bit State	(ON, OFF)
Second Bit Name	Internal or PLC tag
Operation 2	(AND, OR, XOR)
Third Bit State	(ON, OFF)
Third Bit Name	Internal or PLC tag
Operation 3	(AND, OR, XOR)
Fourth Bit State	(ON, OFF)
Fourth Bit Name	Internal or PLC tag

An example of the file format for TMD files is shown below. (*.tmd file extension)

```
0,5x7,UL,INDRED,ON,PURPLE,ON,TURQ,ON,"Message0",OFF,BIT0,AND,ON,BIT1,AND,OFF,BIT2,AND,ON,BIT3
1,7x9,UC,DKRED,OFF,LWNGRN,OFF,INDRED,OFF,"Message1",ON,BIT0,AND,OFF,BIT1,AND,ON,BIT2,OR,OFF,BIT3
2,11x16,UR,RYLBLU,ON,SPRGRN,ON,FUSCH,ON,"Message2",OFF,BIT0,AND,ON,BIT1,OR,OFF,BIT1,XOR,ON,BIT2
3,16x32,CL,PLUM,OFF,GRN3,OFF,DKPINK,OFF,"Message3",ON,BIT0,AND,OFF,BIT1,OR,ON,BIT1,AND,OFF,BIT3
4,5x7,CC,WHEAT,ON,PLUM,ON,MNTGRN,ON,"Message4",OFF,BIT0,OR,ON,BIT1,XOR,OFF,BIT2,OR,ON,BIT0
5,7x9,CR,RCHBLU,OFF,DKGOLD,OFF,PRPL2,OFF,"Message5",ON,BIT0,OR,OFF,BIT1,XOR,ON,BIT2,XOR,OFF,BIT1
6,11x16,BL,SKYBLU,ON,FSTGRN,ON,ORCHID,ON,"Message6",OFF,BIT0,OR,ON,BIT1,AND,OFF,BIT3,AND,ON,BIT2
7,16x32,BC,SLTBLU,OFF,DKGRAY,OFF,DKPLMG,OFF,"Message7",ON,BIT0,OR,OFF,BIT1,AND,ON,BIT3,OR,OFF,BIT3
8,5x7,BR,BLUE,ON,CYAN,ON,MAGENTA,ON,"Message8",OFF,BIT1,XOR,ON,BIT2,OR,OFF,BIT0,XOR,ON,BIT0
9,7x9,UL,BLU2,OFF,CYAN2,OFF,PURPLE,OFF,"Message9",ON,BIT1,XOR,OFF,BIT2,OR,ON,BIT0,AND,OFF,BIT1
10,11x16,UC,RYLBLU,ON,SPRGRN,ON,FUSCH,ON,"Message10",OFF,BIT1,XOR,ON,BIT2,XOR,OFF,BIT1,OR,ON,BIT2
11,16x32,UR,DKPRPL,OFF,MNTGRN,OFF,MDMAG,OFF,"Message11",ON,BIT1,XOR,OFF,BIT2,XOR,ON,BIT1,XOR,OFF,BIT3
12,5x7,CL,SKYBLU,ON,MDGRN,ON,PALMAG,ON,"Message12",OFF,BIT1,AND,ON,BIT3,AND,OFF,BIT2,AND,ON,BIT0
13,7x9,CC,BLU4,OFF,OLVGRN,OFF,STLBLU,OFF,"Message13",ON,BIT1,AND,OFF,BIT3,AND,OFF,BIT2,XOR,OFF,BIT1
14,11x16,CR,SEAGRN,ON,GRN4,ON,PLPINK,ON,"Message14",OFF,BIT1,AND,ON,BIT3,OR,OFF,BIT3,XOR,ON,BIT2
15,16x32,BL,CDTBLU,OFF,GRN5,OFF,GREY,OFF,"Message15",ON,BIT1,AND,ON,BIT3,OR,ON,BIT2,AND,OFF,BIT0
```

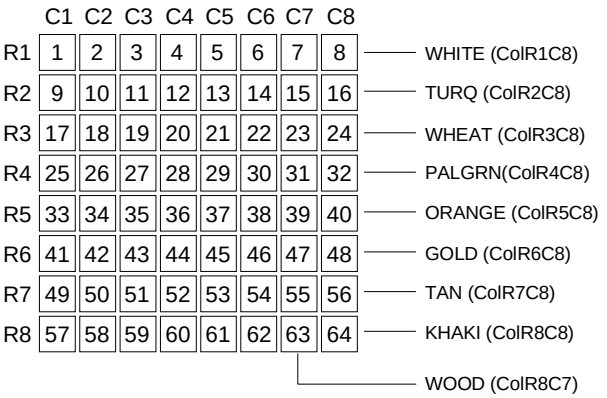
There are a couple of issues that must be considered when creating an TMD file. They are:

Any bits that are used must be fully defined (State and Name).

Any two bits must be joined with an operation (AND, OR, XOR)

Color Index Numbers

The Local Message Display and the Triggered Message Display allow importing and exporting text files that contain color descriptions. Colors can be specified by their color name or by their index number. The index numbers are laid out on a grid that corresponds to the color palette. The index number grid is shown below. The index numbers can be cross-referenced to the 64-color grid so you can match Color Index numbers to a Color name.



64-Color Grid

The Color Grid shows the Color Index number and the Color Name. The help files contain sample colors, however, you must have a display capable of showing 64 colors.

The colors in the grid can be referenced in two ways when preparing an import file for a Local Message Display (*.lmd) or a Triggered Message Display (*.tmd).

Use the names shown in the 64-Color Grid.

Use the Row and Column numbers shown in the Color Index Numbers table (ie. BLACK = ColR1C1; KHAKI = ColR8C8)

Color Index	Color Import Name	Color Index	Color Import Name	Color Index	Color Import Name
1	BLACK	23	YEL2	45	PRPL2
2	BLUE	24	WHEAT	46	STLBLU
3	GREEN	25	PLUM	47	DKORNG
4	CYAN	26	DKPURP	48	GOLD
5	RED	27	GRN3	49	BLU5
6	MAGENTA	28	MNTGRN	50	SEAGRN
7	YELLOW	29	DKPINK	51	DKCYAN
8	WHITE	30	MDMAG	52	GRN4
9	DKRED	31	LOLGRN	53	PINK2
10	BLU2	32	PALGRN	54	PLPINK
11	LWNGRN	33	BLU3	55	CORAL
12	CYAN2	34	SKYBLU	56	TAN
13	INDRED	35	FSTGRN	57	SLTBLU
14	PURPLE	36	MDGRN	58	CDTBLU
15	YLWGRN	37	ORCHID	59	DKGRAY
16	TURQ	38	PALMAG	60	GRN5
17	NVYBLU	39	TANGER	61	DKPLMG
18	RYLBLU	40	ORANGE	62	GREY
19	GRN2	41	RCHBLU	63	WOOD
20	SPRGRN	42	BLU4	64	KHAKI
21	RED2	43	DKGOLD		
22	FUSCH	44	OLVGRN		

RGB Color Map

Here is the list of colors that are available on the 64-color display referenced to their RGB values. The center column shows how colors from a 64 color palette are mapped to an 8 color palette.

	0-255 Values			8 Color	Percent Values		
	Red	Green	Blue		Red	Green	Blue
1	0	0	0	Black	0	0	0
2	0	0	255	Blue	0	0	100
3	0	255	0	Green	0	100	0
4	0	255	255	Cyan	0	100	100
5	255	0	0	Red	100	0	0
6	255	0	255	Magenta	100	0	100
7	255	255	0	Yellow	100	100	0
8	255	255	255	White	100	100	100
9	112	0	0	Black	44	0	0
10	112	0	255	Blue	44	0	100
11	112	255	0	Green	44	100	0
12	112	255	255	Cyan	44	100	100
13	176	0	0	Red	69	0	0
14	176	0	255	Magenta	69	0	100
15	176	255	0	Yellow	69	100	0
16	176	255	255	White	69	100	100
17	0	0	112	Black	0	0	44
18	0	0	176	Blue	0	0	69
19	0	255	112	Green	0	100	44
20	0	255	176	Cyan	0	100	69
21	255	0	112	Red	100	0	44
22	255	0	176	Magenta	100	0	69
23	255	255	112	Yellow	100	100	44
24	255	255	176	White	100	100	69
25	112	0	112	Black	44	0	44
26	112	0	176	Blue	44	0	69
27	112	255	112	Green	44	100	44
28	112	255	176	Cyan	44	100	69
29	176	0	112	Red	69	0	44
30	176	0	176	Magenta	69	0	69
31	176	255	112	Yellow	69	100	44
32	176	255	176	White	69	100	69
33	0	112	255	Blue	0	44	100
34	0	176	255	Cyan	0	69	100
35	0	112	0	Black	0	44	0
36	0	176	0	Green	0	69	0
37	255	112	255	Magenta	100	44	100
38	255	176	255	White	100	69	100
39	255	112	0	Red	100	44	0
40	255	176	0	Yellow	100	69	0
41	112	112	255	Blue	44	44	100
42	112	176	255	Cyan	44	69	100
43	112	112	0	Black	44	44	0

	0-255 Values			8 Color	Percent Values		
	Red	Green	Blue		Red	Green	Blue
44	112	176	0	Green	44	69	0
45	176	112	255	Magenta	69	44	100
46	176	176	255	White	69	69	100
47	176	112	0	Red	69	44	0
48	176	176	0	Yellow	69	69	0
49	0	112	176	Blue	0	44	69
50	0	176	176	Cyan	0	69	69
51	0	112	112	Black	0	44	44
52	0	176	112	Green	0	69	44
53	255	112	176	Magenta	100	44	69
54	255	176	176	White	100	69	69
55	255	112	112	Red	100	44	44
56	255	176	112	Yellow	100	69	44
57	112	112	176	Blue	44	44	69
58	112	176	176	Cyan	44	69	69
59	112	112	112	Black	44	44	44
60	112	176	112	Green	44	69	44
61	176	112	176	Magenta	69	44	69
62	176	176	176	White	69	69	69
63	176	112	112	Red	69	44	44
64	176	176	112	Yellow	69	69	44

Export

The Export button is used to export the logic \ message \ color schemes of the current TMD to a comma delimited file format. The text file will have the *.tmd file extension.

Add Tags

After the tags are entered, click the Add Tags button to enter the tags into the state table. Click the Add Tags button to enter the tags for each message.

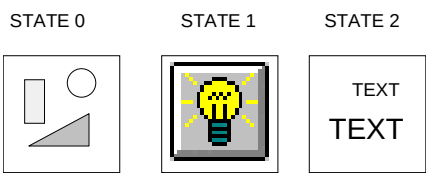
Help

Click the Help button to gain access to help files relating to Numeric Data Display Settings.

Local Image Display

Local Image Display

A Local Image Display consists of a two or more states. Each state can contain graphic elements such as polylines or rectangles, a bitmap, text, or combinations of graphics and text. The local image display can be used to show a single state from a group of states by assigning each state to a PLC word or bit. The following drawing shows some examples of states.



Creating States

A state can contain a single element, such as a polyline or a bitmap image. States can also contain complex images that are made of bitmaps, text, or polylines. You can think of states as a stack of pictures. States can be created by designing the elements for each state on an unused area of a panel, copying the elements to the clipboard, then pasting the grouped elements to the desired state. Once the elements are pasted, they cannot be edited. If you want to change the state, you must recreate the picture elements. This process works well for a small number of states.

Another method of creating states is to design the elements for each state and save the design in a library. The library feature allows you to view all the designs and make changes before creating the Local Image Display. This method is recommended for a Local Image Display with many states. The States dialog box has a Library button for easy access to your designs.

A major design consideration for the Local Image Display is the final size of the display. Once you create all the states, you can size the Local Image Display like other panel objects. When sizing the Local Image Display down, the minimum size is determined by the largest object or group of objects on any one state. For example, if you paste a large bitmap to one of the states, then you cannot size the Local Image Display any smaller than the size of the bitmap. Therefore, consider the size of objects before you begin creating states.

To ensure all states are the same size, you may want to consider using a common graphic element for each state. First, create an unfilled rectangle. Place all elements within the rectangle. Copy the rectangle and all elements to the clipboard or library, then paste them to a state. Do the same procedure for each state. When you size the Local Image Display, the smallest size will be the size of the rectangle, and all states will be exactly the same.

When creating images for the Local Image Display, it is important to remember that the Local Image Display tool draws the graphic associated with each state whenever the variable it is linked to changes.

The graphics from the previous states will be erased when the new graphic is drawn, if you select ERASE PREVIOUS STATE. If you do not select ERASE PREVIOUS STATE, then the new state is pasted on the old state.

Erase State

With the Erase previous state feature off (unchecked), only active states are compiled. That is, only states with images become active states. Active states remain on the display until a new active state is triggered. Here is a chart to show what is appearing on the display.

State	Desired Image	Visible Image
0	Image 1	Image 1
1		Image 1
2	Image 2	Image 2
3		Image 2

Note that when state 1 occurs, Image 1 is still displayed. In some cases, this is not desired. To correct this problem, click the Erase previous state checkbox. This will compile the empty states into black rectangles. Active states will now be removed when an empty state occurs. Now the chart looks like the one below.

State	Desired Image	Visible Image
0	Image 1	Image 1
1		
2	Image 2	Image 2
3		

You can also make a blank state by pasting in an object the same color as the background. This method may work for states that are close together, such as states 0 through 10. This method becomes impractical when states are far apart, such as state 100 and 200.

WARNING: The Erase previous state feature is expensive to use. That is why you are warned to see the Help file before using it. Consider the following examples.

Example 1: Erase previous state unchecked. Create two states, 100 and 200. This will compile into two image files, each file approximately 120 bytes. That means it will cost about 240 bytes of panel memory plus 1 panel resource (plus the size of the bitmap images).

Example 2: Erase previous state checked. All 254 states are compiled. That would be 254 states times 120 bytes! More than 30kb of panel memory!

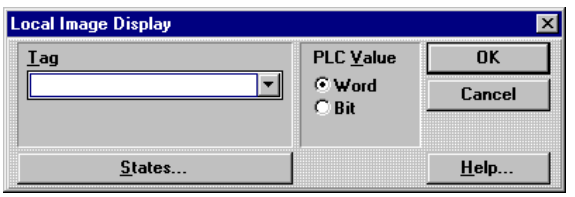
You have several ways to deal with invalid states appearing on the display.

1. Use the Erase previous state feature. (Uses the most memory)
2. Fill some empty states. (Uses a lot of memory)
3. Design ladder logic to eliminate empty states. (Uses PLC resources)
4. Create a project so invalid states don't matter.

Creating a Local Image Display

Click the local image display icon on the Tools menu.

Move the cross hair to the top of the two cells where you want the local image display to appear and click the mouse. If you want to size the local image display immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the local image display. Release the mouse button and the local image display is sized. The Local Image Display dialog box will appear.



Tag Variable

The Tag is a PLC word variable. You can select whether the word is read as a numeric value (Word) or as discrete Bits (Bit). If you read the variable as a word value, then there will be 256 possible states. When the variable is read as discrete bits, then there are 17 possible states (16 bit positions and 0). Enter the tag variable name and click the Word or Bit button. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

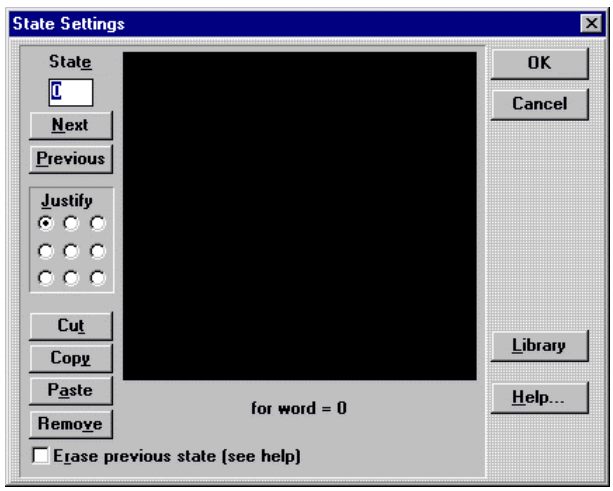
PLC Value

Select Word to control the selection of the state by the value of a PLC word. If the value of the Word is 0, then state 0 will be displayed. When the value changes to 10, then state 10 is displayed. If the PLC Value was set to Word, the state dialog box would appear similar to the following picture.There are 255 states (0 – 254) using Word.

Select Bit to control the selection of the state by the bit assignment of a PLC word. If no bits are set then state 0 is displayed. If bit 4 is set then state 4 is displayed. When multiple bits are ON, the highest order bit in the ON condition determines the selected state. There are 17 states (0 – 16) using Bit.

States

The States button will display the State Settings dialog box. A Local Image Display has two or more states, the maximum number depending on whether you selected the PLC variable as a word or a group of bits. You can change the image of each state. Use the **NEXT** and **PREV** buttons to select a different state. The last state selected will be the one displayed when you click the OK button. There are 255 states (0 – 254) using Word. There are 17 states (0 – 16) using Bit.



Editing

If the image you paste to the current state does not fill the entire window, it will be forced to a position determined by the **Justify** selection.

Cut will remove the contents of the current state. **Copy** will duplicate the contents of the state to the clipboard. **Paste** will copy the contents of the clipboard to the current state. If the image you paste to the current state does not fill the entire window, it will be forced to a position determined by the **Justify** selection. **Remove** will remove the selected state. The **Library** button opens the library browser. Select an object from the library and copy it to the clipboard or drag it to the current state. Use the library to store state images prior to creating the Local Image Display.

The **Erase previous state** checkbox allows you to choose if the state displayed in the local image display is erased when a new state becomes active. In effect, each state is a separate picture.

The Erase previous state checkbox is used to compile all empty states into black rectangles with a black outline. When this feature is checked, it will use a lot of panel memory. See the Erase State section for details.

Library

The Library button opens the library browser. Select an object from the library and copy it to the clipboard or drag it to the current state. Use the library to store state images prior to creating the Local Image Display.

OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the Local Message Display Settings dialog box and exit the dialog box.

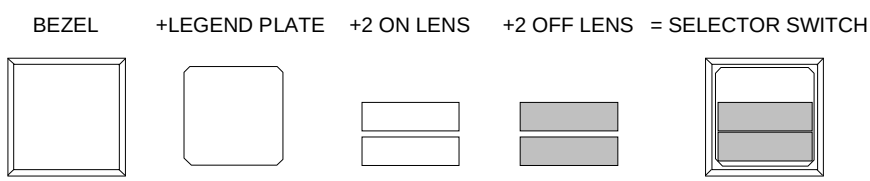
Help

Click the Help button to gain access to help files relating to Local Message Display Settings.

Selector Switch

Creating a selector switch

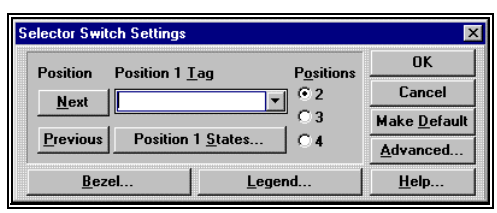
A Selector Switch consists of a bezel, a legend plate and initially two OFF lenses and two ON lenses. The Selector Switch requires multiple variables , one for each selector switch position. These variables will be interlocked so that only one of them can be turned on. Each time the selector switch is pressed the position that is currently on will be turned off and then the next position will be turned on. The number of positions can be two, three, or four.



Click the Selector Switch icon on the Tools menu.

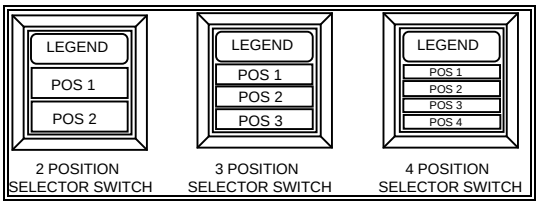
Move the cross hair and Selector Switch image to the top of the two cells where you want the Selector Switch to appear and click the mouse. If you want to size the Selector Switch immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the Selector Switch. Release the mouse button and the Selector Switch is sized.

The following Selector Switch Settings dialog box will appear.



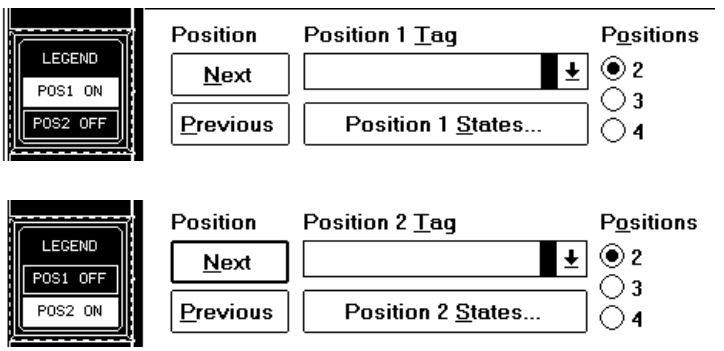
Number of Positions

You can select the number of positions that the selector switch will have by clicking one of the *Positions* option buttons. The default setting is two positions. The following drawing shows the three options.



Position Selector

The current position selector (Next and Previous buttons) allow you to choose which position of the selector switch you are editing. When you choose a position, the tag and states for that position can be edited. To edit other tags and states, change the current position selector. The following drawing shows Position 1 and Position 2 of a two position selector switch.



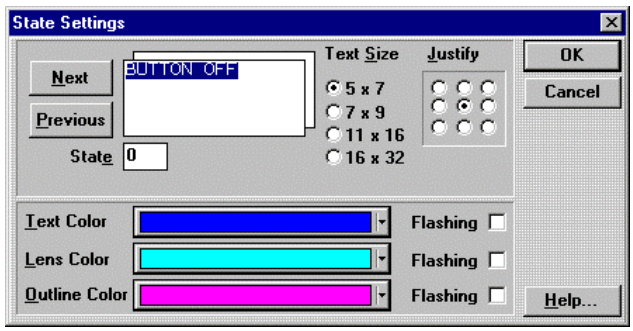
Position Tag Variable

A "tag" variable name must be assigned to each position of the Selector Switch. These tags will be a single discrete bit in the PLC memory that the target display can control. If you have selected a 2 position Selector Switch then you must define a tag bit for position 1 and another tag bit for position 2. If position 1 tag bit is ON and the Selector Switch is pressed, position 1 tag bit is turned OFF and position 2 tag bit is turned ON. Each time the Selector Switch is pressed, the current position tag bit is turned OFF and the next position tag bit will be turned ON. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

States

The States button will display the State Settings menu. Each position of the Selector Switch has two states, ON and OFF. You can change the text size and appearance of each state. You can justify text by clicking one of the Justify radio buttons. Use the Next and Previous buttons to select a different state. The last state selected will be the one displayed when you click the OK button.

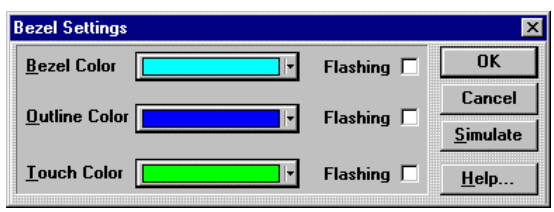
See Appendix D for Color Information.



Bezel

The Bezel portion of the Selector Switch is used to give a visual indication to the operator that the button was pressed. The bezel, outline, and touch color can be modified to enhance the visual impact of the Selector Switch. When the Selector Switch is not pressed the bezel color is displayed, but when the Selector Switch is pressed the touch color will be displayed. The outline color remains constant whether the Selector Switch is pressed or not pressed. Press the Simulate button to observe the action of the bezel color change.

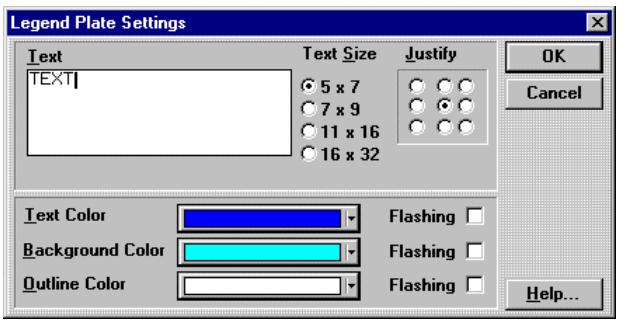
See Appendix D for Color Information.



Legend Plate

The legend plate allows you to provide text information to the operator on the action that will occur when the Selector Switch is pressed . This text is constant and will not change when the Selector Switch is pressed. The text size can be changed , and the text can be justified by clicking one of the Justify radio buttons. The text color, background color, and outline color can be modified in appearance to enhance the application.

See Appendix D for Color Information.



OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the Selector Switch Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all Selector Switches appear the same way, you can click the Make Default button in the Selector Switch Settings dialog box. The current settings in the Selector Switch Settings dialog box will be saved. The next time you create a Selector Switch, the saved settings will automatically be applied.

Advanced Button

NOTE The Advanced Button is enabled when you select Keyboard Attached in the Touch Screen Configuration dialog in Setup.

Clicking the Advanced button will display the Advanced Settings dialog box. The Selector Switch Button operation can be assigned to an external keypad. See Keypads, page 262and Keypad Assignment, page 125, for additional information. Once a keypad is assigned, you can disable the touch screen by checking the *Touch disable* box. If you leave the touch disable box unchecked, then the touch screen and the keypad can both operate the button.

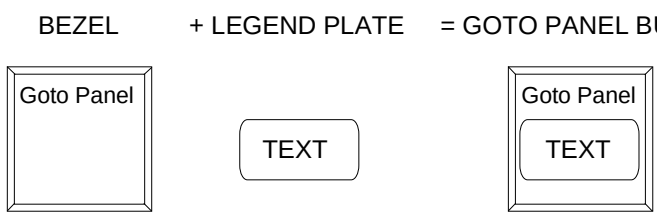
Help

Click the Help button to gain access to help files relating to Selector Switch Settings.

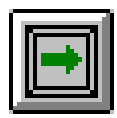
Goto Panel Push Button

Creating a Goto Panel push button

A Goto Panel push button consists of a bezel and a legend plate. The Goto panel push button will allow changing from the currently displayed panel to another selected panel.

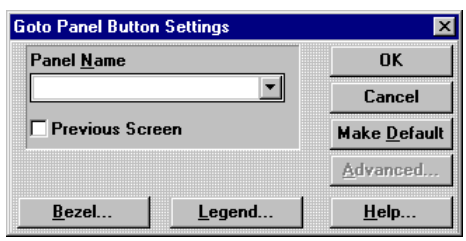


Click the Goto Panel button icon on the Tools menu.



Move the cross hair and Goto Panel button image to the top of the two cells where you want the Goto Panel button to appear and click the mouse. If you want to size the Goto Panel button immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the Goto Panel button. Release the mouse button and the Goto Panel button is sized.

The following Goto Panel Button Settings dialog box will appear.



Panel Name

Use the drop-down list box or type the name of the panel you want to Goto when this push button is pressed.

Each panel you design must be saved with a unique file name. This file name is the only name that is valid for the Goto panel name. You can see a list of current panel names when you select File/Open or File/Save.

There is a dilemma in creating a Goto panel button when the panel you intend to go to has not been created yet. For example, if you are working on your very first panel and you create a Goto push button that will be used to go to the next panel, what name will be used in the Panel Name field? The name you pick must be *exactly* the same name as the panel you intend to go to. For example, assume that you intend to go to the panel called MAIN. You must enter the panel name as "MAIN". You cannot use, "main." When you create the panel called "MAIN", make sure you save it using the name "MAIN."

Previous Panel

The Goto Panel button can be used to select the previous panel, without having to select a panel name. Click the Previous Panel checkbox and the Goto Panel button will display the previous panel. Previous panels are tracked in a stack so you can go back 32 times. You cannot go back farther than the original panel you started on. If you start at panel 1 and go to panel 2, you can back up to panel 1. If you press Previous Panel again while on panel 1, you will not go to panel 2. Previous Screen does not go to the last panel you were on, but to the last panel on the stack.

Using Goto Panel Buttons

The Goto Panel button has two modes of operation. In the local mode, pressing the Goto Panel button will display the designated panel, or if the Previous Panel option is checked, the previous panel is displayed. No connection to the PLC is required. In the PLC mode, a register in the PLC is used to trigger the desired panel. The Goto button writes the Panel Id number to the PLC register. When any new Panel Id is written to the PLC register, the target display reads the value and the new panel will be triggered.

The mode is determined by the Panel Trigger Tag option in the display device Configuration dialog box.

If the Panel Trigger Tag is left blank, then the Goto button works in the local mode. When you press the Goto button, the selected panel will be displayed. You do not have to be connected to a PLC for the Goto button to work properly.

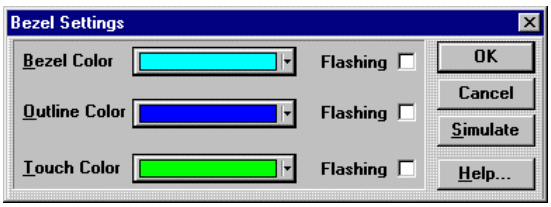
If you designate a Panel Trigger Tag, the target display MUST be connected to the PLC for the Goto button to work properly. Pressing the Goto button causes the target display to write the Panel ID number to the Panel Trigger Tag. The target display will then read the Panel Trigger Tag register, and when it sees a change in value, it will trigger the designated panel. You must have a good communication link to the PLC for the Panel Trigger Tag to work correctly.

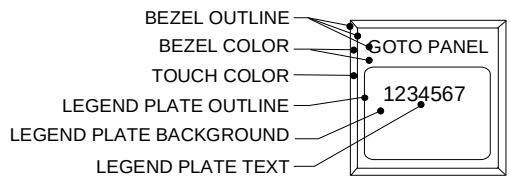
To reach the display device configuration dialog box, go to Projects and click Setup. In the Project Setup dialog box, click the Setup button for the display device. The target display Configuration dialog will appear.

Bezel

The Bezel portion of the Goto Panel push button presents a visual indication to the operator that a new panel will be displayed when it is pressed. The bezel, outline, and touch color can be modified to enhance the visual impact of the Goto Panel push button. When the push button is not pressed the bezel color is displayed, but when the Goto Panel push button is pressed the touch color will be displayed. The outline color remains constant whether the Goto Panel push button is pressed or not. Press the Simulate button to observe the action of the bezel color change.

See Appendix D for Color Information.

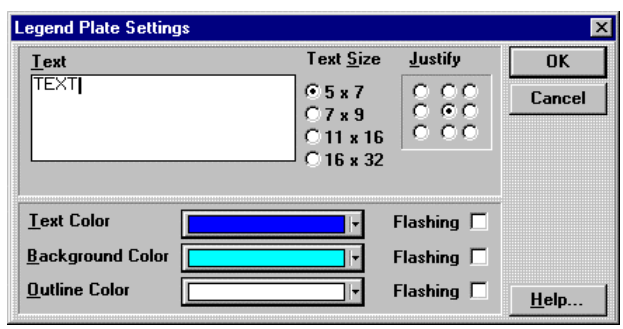




Legend Plate

The legend plate allows you to provide text information to the operator about what panel will be displayed when the Goto Panel push button is pressed . This text is constant and will not change when the Goto Panel push button is pressed. The text size can be changed, and the text can be justified by clicking one of the Justify radio buttons. The text color, background color, and outline color can be modified in appearance to enhance the application.

See Appendix D for Color Information.



OK

Click the OK button to apply the information in the Goto Panel Button Settings dialog box and close it.

Cancel

Cancel all changes to the Goto Panel Button Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all Goto Panels appear the same way, you can click the Make Default button in the Goto Panel Button Settings dialog box. The current settings in the Goto Panel Settings dialog box will be saved. The next time you create a Goto Panel, the saved settings will automatically be applied.

Advanced Button

NOTE The Advanced Button is enabled when you select Keyboard Attached in the Touch Screen Configuration dialog in Setup.

Clicking the Advanced button will display the Advanced Settings dialog box. The Goto Panel Button operation can be assigned to an external keypad. See Keypads, page 262 and Keypad Assignment, page 125, for additional information. Once a keypad is assigned, you can disable the touch screen by checking the *Touch disable* box. If you leave the touch disable box unchecked, then the touch screen and the keypad can both operate the button.

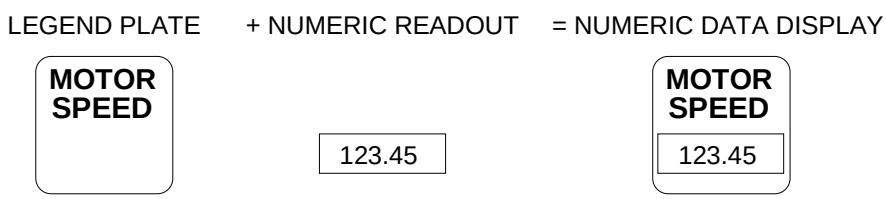
Help

Click the Help button to gain access to help files relating to Goto Panel Settings.

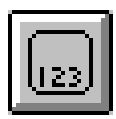
Numeric Data Display

Creating a Numeric Data Display

A Numeric Data Display consists of a numeric readout and a legend plate. The data display requires a PLC tag variable for the numeric data.

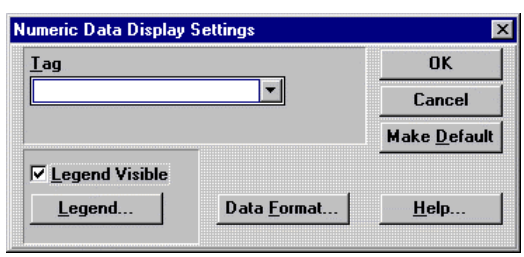


Click the Numeric Data Display icon on the Tools menu.



Move the cross hair and the Numeric Data Display image to the top of the two cells where you want the Numeric Data Display to appear and click the mouse. If you want to size the Numeric Data Display immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the Numeric Data Display. Release the mouse button and the Numeric Data Display is sized.

The following Numeric Data Display dialog box will appear.



Tag Variable

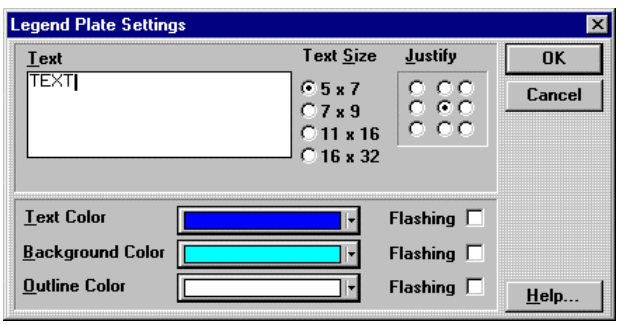
A "tag" variable name must be assigned to the numeric Data Display. This tag will be a word in the PLC memory that the target display can read. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

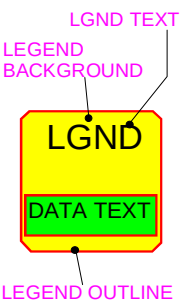
Legend Plate

The legend plate allows you to provide text information to the operator about the meaning of the current value being displayed. You can remove the Legend Text, Legend Background, and Legend Outline by unchecking the Legend Visible check box. The Legend button will then become disabled (grayed out). Only the Data Text and the associated background color will be visible.

The text size can be changed , and the text can be justified by clicking one of the Justify radio buttons. The text color, background color, and outline color can be modified in appearance to enhance the application.

See Appendix D for Color Information.





Data Format Settings

The data format window allows setting up the display information.

Text Size: Font Size of the text characters expressed as pixels. Smaller text allows more characters in the text field.

Justification: Determines if the text characters are forced to the Left, Right, or Center.

Signed Number: (+/- sign) if the PLC supports signed values.

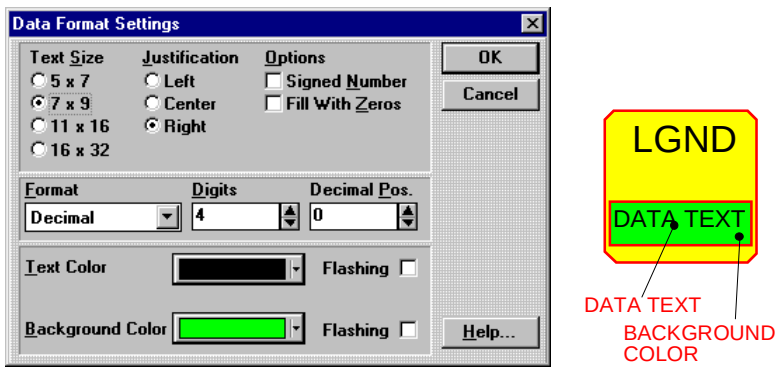
Fill With Zeros: Check to display leading zeros.

Format: Decimal, binary, hexadecimal, octal, or floating point.

Digits: Number of numerical characters displayed, equal to or less than the maximum allowed because of the text size selected.

Decimal Positions: Number of digits that will be displayed to the right of the decimal point. A decimal point is counted as one of the Digits positions.

See Appendix D for Color Information.



OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the Numeric Data Display Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all Numeric Data Displays appear the same way, you can click the Make Default button in the Numeric Data Display Settings dialog box. The current settings in the Numeric Data Display Settings dialog box will be saved. The next time you create a Numeric Data Display, the saved settings will automatically be applied.

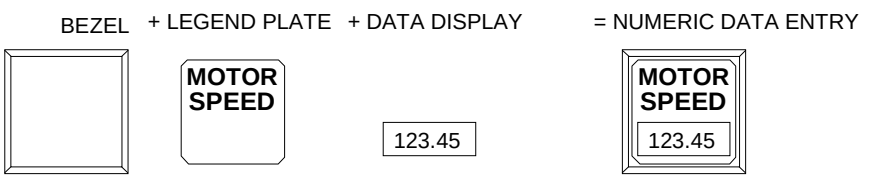
Help

Click the Help button to gain access to help files relating to Numeric Data Display Settings.

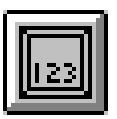
Numeric Data Entry

Creating a Data Display with Keypad Entry

A numeric data display with data entry consists of a bezel, data display and a legend plate. The data display also requires a variable that it will read and display the current value. When the bezel is touched, the screen will display a data entry panel.

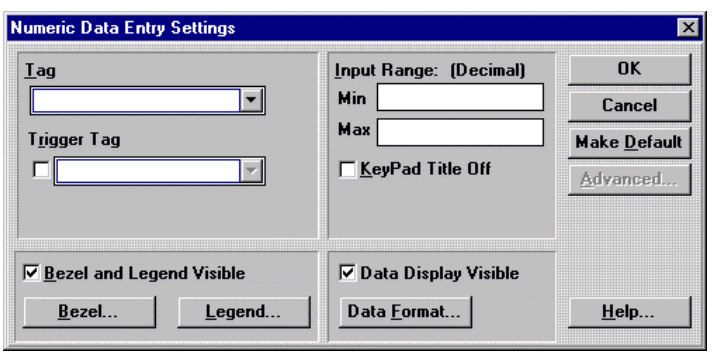


Click the Numeric Data Entry icon on the Tools menu.



Move the cross hair and the Numeric Data Entry image to the top of the two cells where you want the Numeric Data Entry to appear and click the mouse. If you want to size the Numeric Data Entry immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the Numeric Data Entry. Release the mouse button and the Numeric Data Entry is sized.

The following Numeric Data Entry Settings dialog box will appear.



Tag Variable

A "tag" variable name must be assigned to the Numeric Data Entry. This tag will be a word in the PLC memory that the target display can read and update. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

Trigger Tag

This tag will be a word/bit in the PLC memory that the target display can write to. A bit is set when the ENTER key is pressed and reset when the ENTER key is released. If a word is selected for the trigger tag, the low order bit is set. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

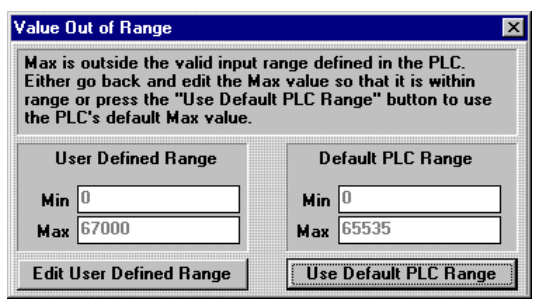
KeyPad Title Off

When you touch a Numeric Data Entry button, the current panel is erased and replaced by a numeric data entry panel. The legend text from the Numeric Data Entry button will normally appear at the top of the data entry panel. Checking the KeyPad Title Off box will remove the text from the top of the data entry panel. See the *Data Entry Panel* on page 222.

Input Range

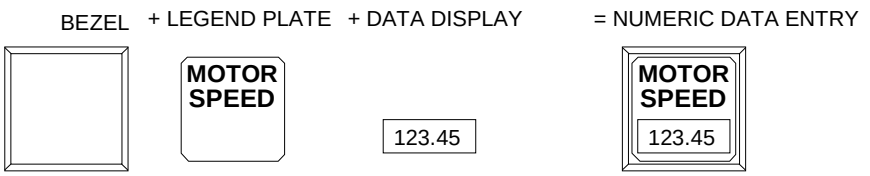
The min and max range settings are determined by the PLC type and the tag variable type. You can change the range values to allow only a specific range of values.

If you enter an incorrect value for the min or max range values, an error message will appear. The dialog box will identify the type of errror and display the User Defined Range and the Default PLC Range. Buttons in the dialog box allow editing the user defined range values or using the default settings.


Value Out of Range
Max is outside the valid input range defined in the PLC. Either go back and edit the Max value so that it is within range or press the "Use Default PLC Range" button to use the PLC's default Max value.
User Defined Range
Min 0
Max 67000
Default PLC Range
Min 0
Max 65535
Edit User Defined Range
Use Default PLC Range

Bezel and Legend Visible

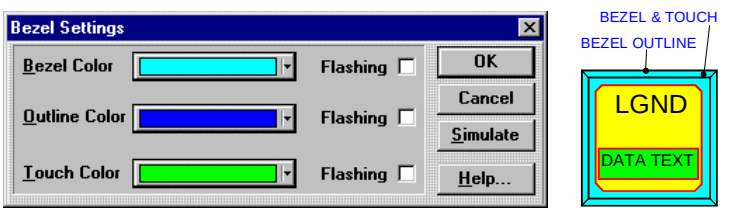
The following drawing shows the three main parts that are combined to make the Numeric Data Entry operator. If you uncheck the Bezel and Legend Visible checkbox, you will only see the data display. You can also make the data display invisible by unchecking the Data Display Visible checkbox. If you uncheck both the Bezel and Legend Visible checkbox and the Data Display Visible checkbox, you will see a cross-hatch pattern in the editor and nothing when the operator is downloaded to a display. However, there will still be an active touch screen area that will activate the data entry keypad. This feature is used to place a data entry keypad behind a custom bitmap.



Bezel

The Bezel portion of the Numeric Data Entry is used to give a visual indication to the operator that the button was pressed The bezel, outline, and touch color can be modified to enhance the visual impact of the Numeric Data Entry button. When the push button is not pressed the bezel color is displayed, but when the push button is pressed the touch color will be displayed. The outline color remains constant whether the push button is pressed or not pressed. Press the Simulate button to observe the action of the bezel color change.

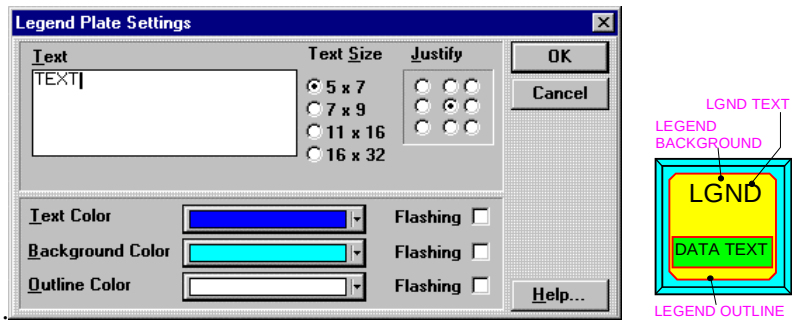
See Appendix D for Color Information.



Legend Plate

The legend plate allows you to provide text information to the operator about the meaning of the current value being displayed. The text size can be changed , and the text can be justified by clicking one of the Justify radio buttons. The text color, background color, and outline color can be modified in appearance to enhance the application.

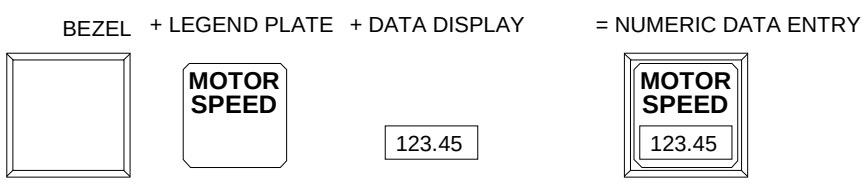
See Appendix D for Color Information.



Data Display Visible

The following drawing shows the three main parts that are combined to make the Numeric Data Entry operator. If you uncheck the Data Display Visible checkbox, you will only see the Bezel and Legend Plate.

You can also make the Bezel and Legend invisible by unchecking the Bezel and Legend Visible checkbox. If you uncheck both the Bezel and Legend Visible checkbox and the Data Display Visible checkbox, you will see a cross-hatch pattern in the editor and nothing when the operator is downloaded to a display. However, there will still be an active touch screen area that will activate the data entry keypad. This feature is used to place a data entry keypad behind a custom bitmap.



Data Format Settings

The data format window allows setting up the display information.

Text Size: Font Size of the text characters expressed as pixels. Smaller text allows more characters in the text field.

Justification: Determines if the text characters are forced to the Left, Right, or Center.

Signed Number: (+/- sign) if the PLC supports signed values.

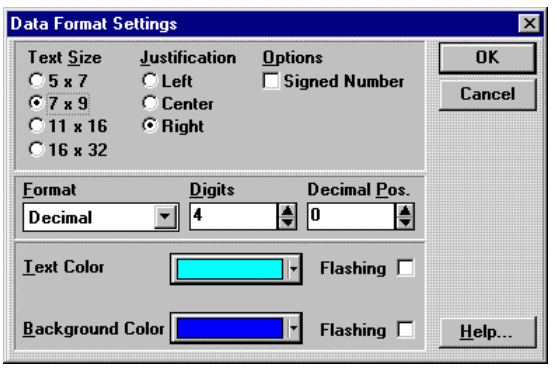
Fill With Zeros: Check to display leading zeros.

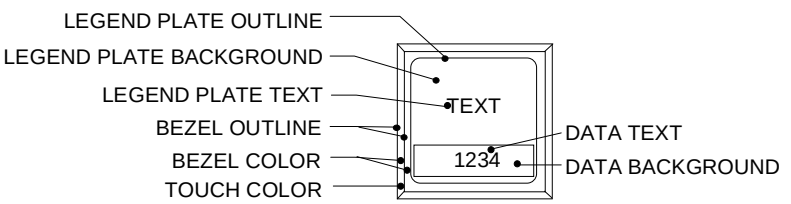
Format: Decimal, binary, hexadecimal, octal, or floating point.

Digits: Number of numerical characters displayed, equal to or less than the maximum allowed because of the text size selected.

Decimal Positions: Number of digits that will be displayed to the right of the decimal point. A decimal point is counted as one of the Digits positions.

See Appendix D for Color Information.



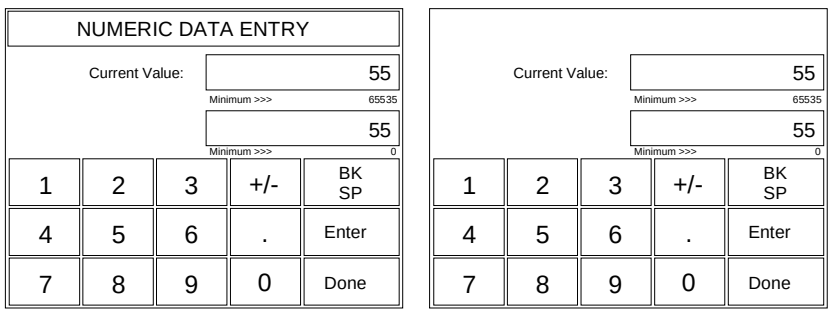


Data Entry Panel

When the Numeric Data Entry push button is pressed, a data entry panel (keypad) will be displayed. The legend text from the Numeric Data Entry button will be displayed on the top of the panel as the keypad title. You can delete the keypad title by checking the KeyPad Title Off box in the Numeric Data Entry Settings dialog box.

The data entry panel will look different if you are using an optional keypad. See Keypads, page 262 and Keypad Assignment, page 125, for additional information.

The current variable value is displayed in the Current Value field. The min and max entry values are displayed. Press the numeric buttons and the ENTER button to enter a new value. If the value is out of range or otherwise incorrect, the display will beep and a warning message will flash. If the data is valid when you press the ENTER button, the value will be sent to the PLC. Press the DONE button to return to the normal display.



OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the Numeric Data Entry Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all numeric data entry buttons appear the same way, you can click the Make Default button in the Numeric Data Entry Settings dialog box. The current settings in the Numeric Data Entry Settings dialog box will be saved. The next time you create a Numeric Data Entry button, the saved settings will automatically be applied.

Advanced Button

NOTE The Advanced Button is enabled when you select Keyboard Attached in the Touch Screen Configuration dialog in Setup.

The Numeric Data Entry Button operation can be assigned to an external keypad. See Keypads, page 262, and Keypad Assignment, page 125, for additional information. Once a keypad is assigned, you can disable the touch screen by checking the *Touch disable* box. If you leave the touch disable box unchecked, then the touch screen and the keypad can both operate the button.

Help

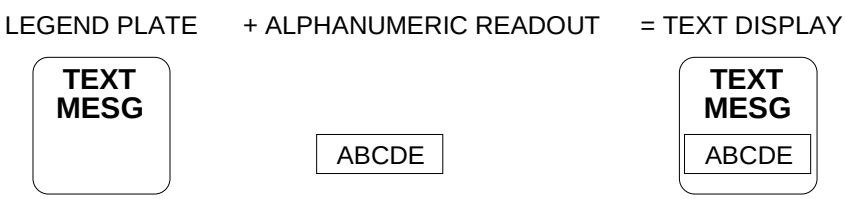
Click the Help button to gain access to help files relating to Numeric Data Entry Settings.

Text Display

Creating a Text Display

A Text Display consists of an alphanumeric readout and a legend plate. Data is read from a PLC register and displayed as text.

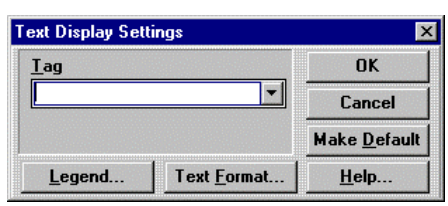
NOTE If your PLC supports text variables, the PLC register will be read as two text characters. Otherwise the PLC register will be read as a single text character.



Click the Text Display icon on the Tools menu.

Move the cross hair and the Text Display image to the top of the two cells where you want the Text Display to appear and click the mouse. If you want to size the Text Display immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the Text Display. Release the mouse button and the Text Display is sized.

The following Text Display dialog box will appear.



Tag Variable

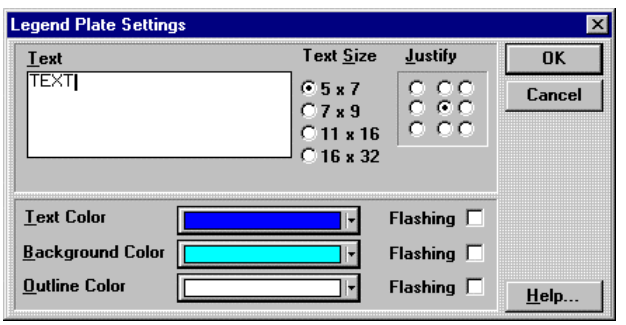
A "tag" variable name must be assigned to the numeric Text Display. This tag will be a word in the PLC memory that the target display can read. For example, in an Allen-Bradley PLC5, the word A2:0 contains 2 ASCII characters. You must change the tag variable type to String. See Tag Attributes on page 58 for more details. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

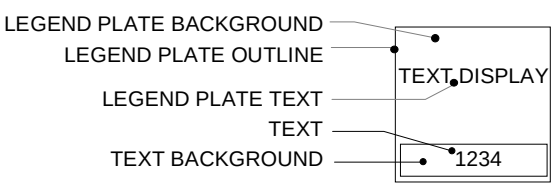
NOTE The Tag variable type must be set to String. See Tag Attributes section.

Legend Plate

The legend plate allows you to provide text information to the operator about the meaning of the current text being displayed. The legend text size can be changed , and the legend text can be justified by clicking one of the Justify radio buttons. The legend text color, background color, and outline color can be modified in appearance to enhance the application.

See Appendix D for Color Information.



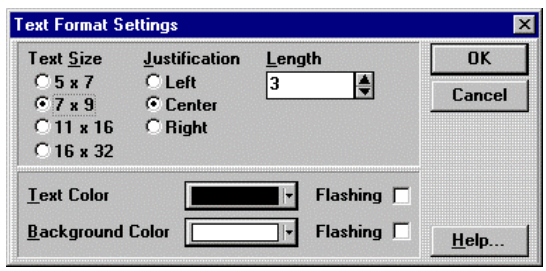


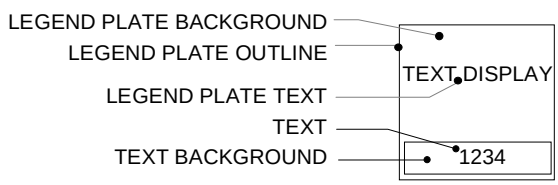
Text Format Settings

The text format dialog box has option buttons for selecting the text size and text justification. The text color and background can be modified to enhance the appearance. The default text size is set to 7x9 and justification is set to Center.

See Appendix D for Color Information.

The Length field is used to select how many characters will be displayed in the text field. For example, entering the Length as 3 will display 3 characters.





OK

Click the OK button to apply the information in the Text Display Settings dialog box and close it.

Cancel

Cancel all changes to the Text Display Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all Text Displays appear the same way, you can click the Make Default button in the Text Display Settings dialog box. The current settings in the Text Display Settings dialog box will be saved. The next time you create a Text Display, the saved settings will automatically be applied.

Help

Click the Help button to gain access to help files relating to Text Display Settings.

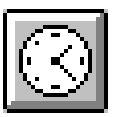
Time/Date

Creating a Time/Date display

A Time/Date display consists of a bezel and numeric readout.

LENS	+ NUMERIC READOUT	= CLOCK DISPLAY
	12:59 AM	12:59 AM

Click the Time icon on the Tools menu.



Move the cross hair and time image to the top of the cell where you want the time to appear and click the mouse. If you want to size the time display immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the time display. Release the mouse button and the time display is sized.

The following Time Display Settings dialog box will appear. You can select a Time display or a Date display. Selecting Time will display the Time Options and selecting Date will display the Date Options.

The text size can be changed , and the text can be justified by clicking one of the Justify radio buttons. The text color, lens color, and outline color can be modified.

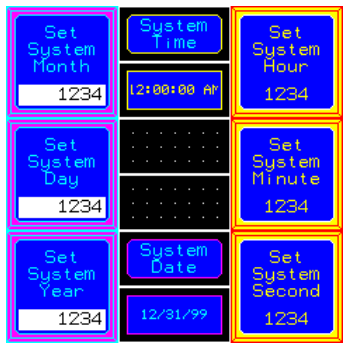
See Appendix D for Color Information.

The default settings for time are hours and minutes, in 12 hour format. You can add seconds to the clock display by checking the Seconds box. Military time is displayed in 24 hour format. For example, 2:30PM would be 1430 hours.

The default setting for date is Dd/Mm/Yyyy

Setting the target display time and date

To set the time on a display, use the Numeric Data Entry tool to set the internal variables Hour, Minutes, and Seconds. To set the date, use the Numeric Data Entry tool to set the internal variables Month, Day, and Year. (Do not use any other tool to modify the internal variables.) The following panel shows how to design a panel for setting the display time and date. The panel consists of Numeric Data Entry tools for reading and modifying system variables, and Numeric Data Display tools for displaying the system time and date.



For System Hour, set the Numeric Data Entry tag name to **~System_Hour**. You must type the tag name exactly as shown, including the tilde at the beginning. Remember to enter the desired text in the legend plate to identify the Numeric Data Entry tool as system hour. Set the Input Range Min and Max values (1 to 12 for 12 hour display or 0 to 23 for Military display).

For System Minute, set the tag name to **~System_Minute** and for System Second, set the tag variable to **~System_Second**. Remember to enter the desired text in the legend plates to identify system minute and system second. Also remember to set the Input Range Min and Max values for minutes and seconds.

For System Month, set the tag name to **~System_Month**, for System Day set the tag variable to **~System_Day**, and for System Year, set the tag variable to **~System_Year**.

Save the panel and download it to the target display. Use the data entry operators to set the Time and Date for your display. The target display maintains the system time and date between power cycles.

Make Default

If you decide that you want to have all Time Displays appear the same way, you can click the Make Default button in the Time Display Settings dialog box. The current settings in the Time Display Settings dialog box will be saved. The next time you create a Time Display, the saved settings will automatically be applied.

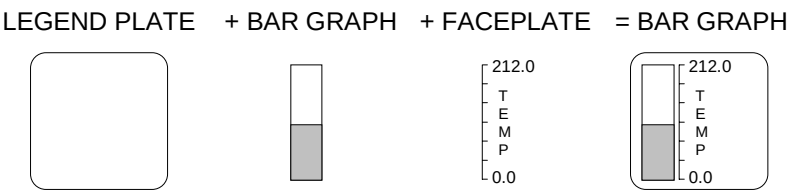
Help

Click the Help button to gain access to help files relating to Time Display Settings.

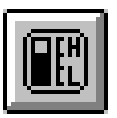
Bar Graphs

Creating a bar graph

A bar graph consists of a legend plate and a special display that shows data in a bar graph format.



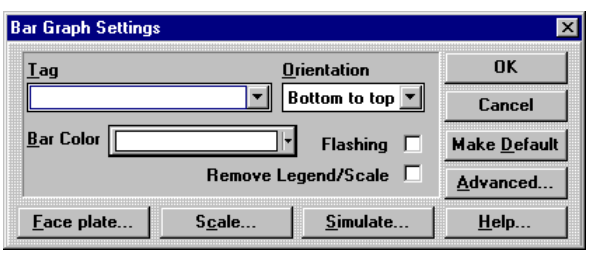
Click the bar graph icon on the Tools menu.



Move the cross hair to the top of the two cells where you want the bar graph to appear and click the mouse. If you want to size the bar graph immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the bar graph. Release the mouse button and the bar graph is sized.

The following Bar Graph Settings dialog box will appear. Note the Face plate, Scale, and Simulate buttons, which when pressed will display the associated dialog box.

See Appendix D for Color Information.



Tag Variable

A "tag" variable name must be assigned to the numeric Bar Graph operator. This tag will be a word in the PLC memory that the *QUICKPANEL* can read. A list of valid PLC tags can be found by locating your PLC type in the Communications User manual. Tags can be edited by clicking the object and selecting Change Object Tags (Ctrl+T) from the Edit menu. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field.

NOTE Any variable assigned to a Bar Graph MUST be a 16 bit integer type variable.

Orientation

There are four ways to orient the bar graph:

- bottom to top: as the value is increased from min to max, the graph will grow from the bottom to the top.
- top to bottom: as the value is increased from min to max, the graph will grow from the top to the bottom.
- left to right: as the value is increased from min to max, the graph will grow from the left to the right.
- right to left: as the value is increased from min to max, the graph will grow from the right to the left.

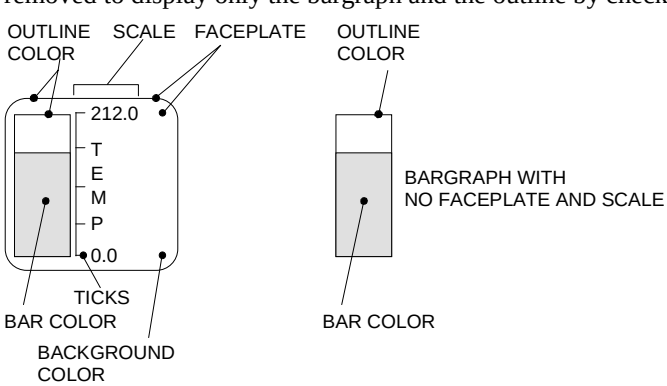
Bar Color

Click on the Bar Color list box to display a color chart. Click on your color choice and the bar changes to that color. Check the Flashing box to make the bar color flash. The area the bar does not cover will always appear BLACK when downloaded to a QuickPanel.

See Appendix D for Color Information.

Remove Face Plate/Scale

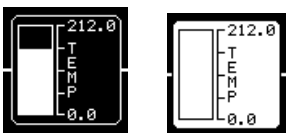
The bar graph normally has a Face Plate and a Scale. The Face Plate consists of an area surrounding the bargraph and scale. The Face Plate background and outline colors are selectable. The Scale consists of the scale range settings, the scale text and the tick marks. The Face Plate and the Scale can be removed to display only the bargraph and the outline by checking the Remove Face Plate/Scale box. to

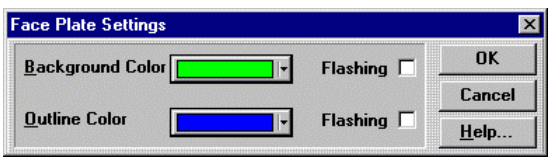


Face Plate

The face plate settings allow you to select different background and outline colors for the bar graph. However, when you download the project, the background for the bar (area not covered by the bar) is always black. Text and scale color are set in the Scale Settings dialog box.

See Appendix D for Color Information.





Scale

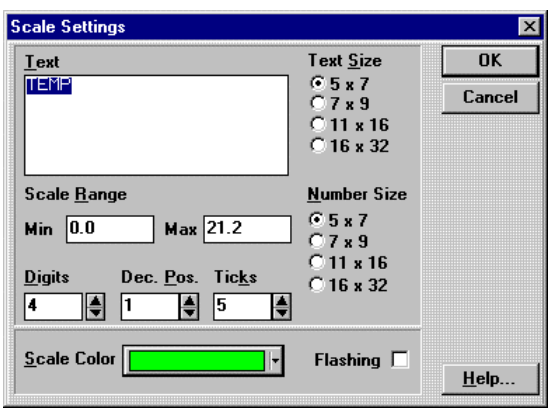
The Scale Settings menu is used to customize the bar graph. Enter the Text and select the Text Size to appear on the graph. Text is vertical for top-to-bottom and bottom-to-top graphs, and horizontal for left-to-right and right-to-left graphs.

Enter the Scale Range, enter Min (minimum) and Max (maximum) values. Number Size refers to the numbers on the scale. Select the number of Digits and Decimal Positions. A decimal position is the number of digits to the right of the decimal point. The decimal point counts as a digit.

Tick marks are placed next to the bar graph to delineate the graph into equal segments. Select the number of tick marks for the graph.

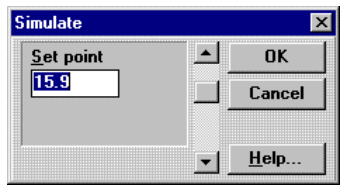
Select the Scale Color and click OK to complete the bar graph.

See Appendix D for Color Information.



Simulate

Simulate allows viewing the graph as the data value is changed between the minimum and maximum values with the scroll bar.



OK

Click the OK button to apply the information in the settings menu and close the menu.

Cancel

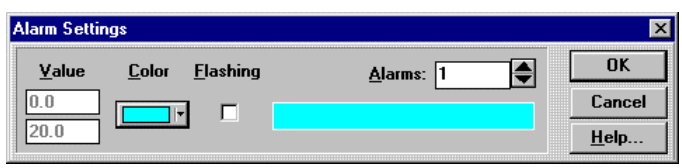
Cancel all changes to the Bar Graph Settings dialog box and exit the dialog box.

Make Default

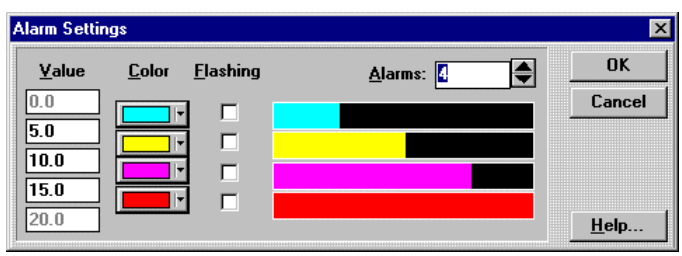
If you decide that you want to have all bar graphs appear the same way, you can click the Make Default button in the Bar Graph Settings menu. The current settings in the Bar Graph Settings menu will be saved. The next time you create a bar graph, the saved settings will automatically be applied.

Advanced

Clicking the Advanced button brings up the Alarm Settings dialog box. The bar graph can be divided into different sections, based on the range value and color. The bar graph can therefore show different colors for different alarm variable values. The following dialog shows a single color for a range of 0 to 20.



To add more alarm ranges, click the up arrow button to the right of the Alarms number box. Each increase will add another Value box and Color selection button. In the following example, there are four ranges selected and each range has a different color and value setting. The ranges are : 0 to 5, 5 to 10, 10 to 15, and 15 to 20. The minimum and maximum range values cannot be changed in this dialog box. You can change them in the Scale Settings dialog.



Use caution when selecting the value for the alarm range. A short review of Bar Graphs is necessary before we discuss alarm values.

You can set the Min and Max scale values to show the full value of the tag variable or some portion of it. For example, if the tag variable has an actual value of 0 to 65535, you can go to the Scale Settings dialog box and set the Min to 0 and the Max to 65535 to display the full variable range. See Figure 1.

If you set the Min to 0 and the Max to 200, then the bar graph will display only the range of the variable from 0 to 200. See Figure 2.

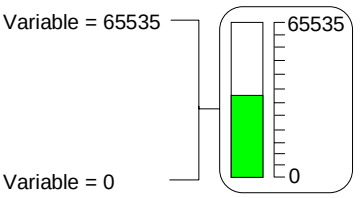


Figure 1

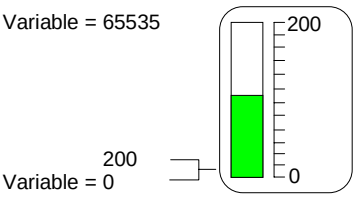


Figure 2

The bar graph is divided into 100 segments which represent 1 percent of the range value. For example, if the Min and Max scale range is 0 to 200, then each increment of the bar graph is 1 percent, or 2. Each time the variable increases by 2, the bar graph will show a change.

The alarm values operate by changing colors at the 1 percent points. In the previous example, the alarm values can change colors at 2, 4, 6, 8, etc.

If you set the value for changing colors to 5, it will not work since the changes can only occur at the 1 percent increment points. The bar can change color at 4 and 6, but not at 5. The range value must be divided by 100 to arrive at the true change points. For example, if the Min is set to 0 and the Max is set to 500, then 1 percent of the range is 5. The alarm values in this case can be set to change at increments of 5.

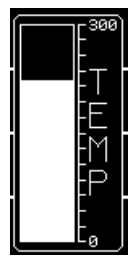
Help

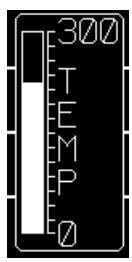
Click the Help button to gain access to help files relating to Bar Graph Settings.

Examples

The following examples illustrate the variety of bar graphs you can easily create. Experiment with different size text, changing the number of ticks, min and max values and other settings to make the desired graph. Remember that you can resize the bar graph to fit more than two cells.

NOTE When you download a bargraph, the background fill color is always black.



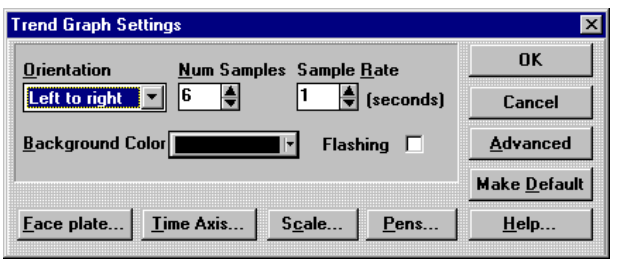


Trend

Creating a Trend Display

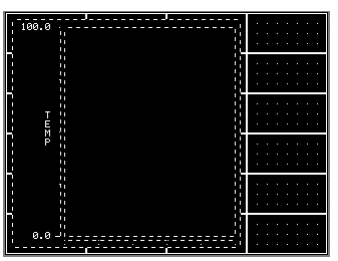
When you read a variable from a control device, you have one piece of data that can be displayed in a panel operator, such as a Numeric Display. When you read the same variable over a period of time and save the data, you have collected a data set. When you show all the points in the data set, you have a trend display. If you read a variable over a period of time, collect the data set in a buffer and display the data, you have a QuickPanel trend display. The Trend display is capable of displaying data from multiple data sets.

To add a trend display to a panel, click the trend icon in the floating Tools menu. The Trend Graph Settings dialog box appears. Each of the buttons controls a major section of the Trend Graph design.



Orientation refers to the direction the trend will be displayed. The number of samples determines how many data points will appear on the screen. The sample rate determines how often a new sample is taken. Background color is the color behind the trend display.

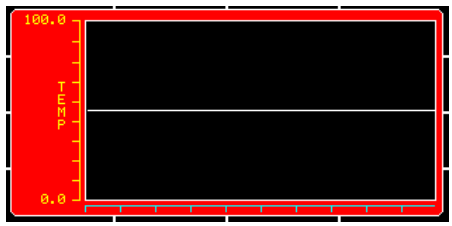
A sample trend operator is shown below.



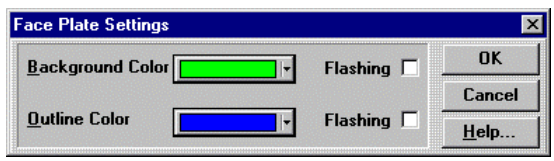
There is a limitation when using large trend displays on a 10.5" color and 9" Mono displays. In some cases, a trend display 8 cells wide by 12 cells high, with a sample rate of 1 second, would appear to lockup a panel. When the trend display was reduced to 8 cells wide by 8 cells high, the panel updated normally. If you experience this problem, reduce the size of the trend display.

Face Plate

The face plate is the area around the trend display. You can select the faceplate color and the outline color. A sample is shown below.

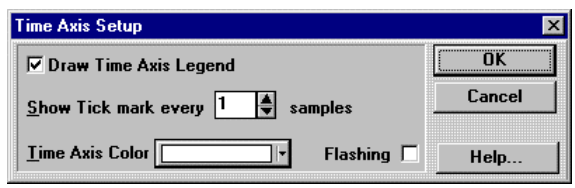


To select the faceplate colors, click the **Face plate** button. Select the desired colors and click OK.

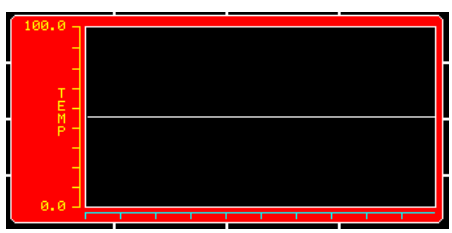


Time Axis

The time axis displays the trend samples as a function of time. If the display is Left-to-right, the time axis will be on the bottom of the display. You can display tick marks to show time marks. For example, you can display a tick mark every 20 samples so the operator can clearly see that 20 samples have been taken. You can uncheck the Draw Time Axis Legend checkbox to remove the time axis from the trend. Select the time axis color and click OK.

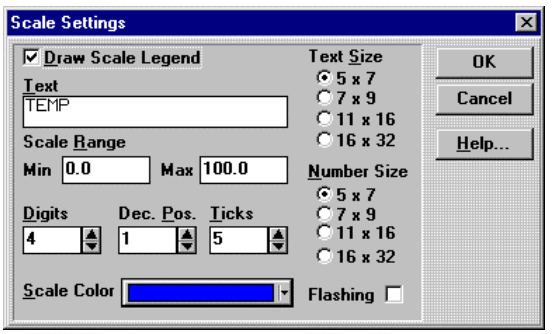


The following example illustrates a display with a time axis. There are 250 samples and the time axis tick marks are set to 25 samples.



Scale Settings

In a Left-to-right display, the scale will be located on the left side of the trend display. The scale settings dialog allows selecting different attributes to customize the scale to suit your application.



Uncheck Draw Scale Legend to remove scale legend from the Trend display.

Enter the Text and select the Text Size to appear on the trend. Text is vertical for left-to-right and right-to-left trends, and horizontal for top-to-bottom and bottom-to-top graphs. Blank spaces are ignored.

Enter the Scale Range, enter Min (minimum) and Max (maximum) values. The Min and Max values are for the display only and this setting does not automatically scale the input variable. Use the Pens button to setup the input and scale ranges. Number Size refers to the numbers on the scale. Select the number of Digits and Decimal Positions. A decimal position is the number of digits to the right of the decimal point. The decimal point counts as a digit.

Tick marks are placed next to the trend to delineate the graph into equal segments. Select the number of tick marks for the display.

Select the Scale Color and click OK to complete the trend.

Pens

Pens are the plots of the data set samples. The plots produce a trace in the display. Each pen is tied to a single variable so the pen shows the data set for the variable.

NOTE Any variable assigned to a Trend MUST be a 16 bit integer type variable.

Each pen has a default name that can be changed in the **Name** data entry box. Enter the tag name and the values for the Input Range and the Scale Range will appear. You can have up to eight pens for each trend display, up to a maximum of 20 pens for an entire project. The number of pens available for the current trend and the number of total pens used is displayed in a status box at the bottom of the dialog box.

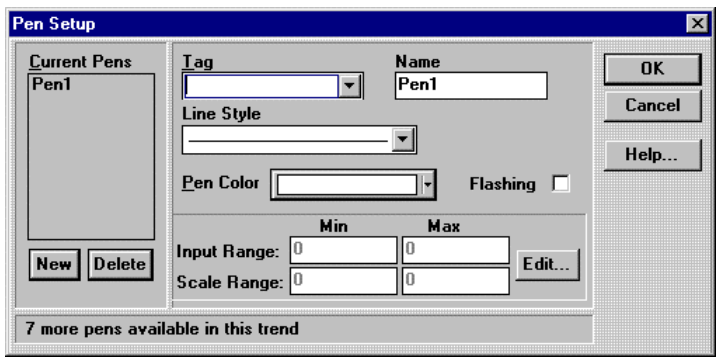
NOTE You can have up to eight pens for each trend display, up to a maximum of 20 pens for an entire project.

To add a new pen, click **New** and the next available default pen name appears. Remember that the name can be changed.

Select the line style and pen color, then click OK.

CAUTION You can edit the values for the ranges by clicking the Edit button. These values represent the Min and Max values for the tag variable assigned to the

pen. Once you edit these values, they are changed for any other panel object that may use the same tag variable. However, if you change the tag attributes through the Tag editor, you will not change the Input Range and Scale Range settings in the Pen Setup.



OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

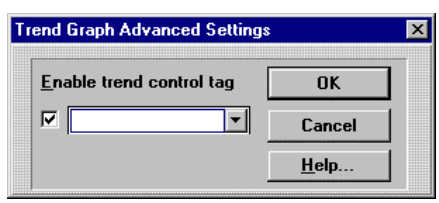
Cancel all changes to the Trend Settings dialog box and exit the dialog box.

Advanced

The Advanced button will display the Trend Graph Advanced Settings dialog box. Clicking the Enable Trend Control checkbox will enable the Tag list box. The Tag variable can be a bit or word.

If you select a bit variable, the trend is started when the bit is set to 1 and stopped when the bit is set to 0.

If you select a Word variable, the least significant bit (usually bit 0) controls the start/stop function. When the bit is 1, the Trend function is started. The next significant bit (usually bit 1) controls the clear function. Setting the clear bit to 1 will clear the Trend display. If there is a condition when both control bits are 1, then the least significant bit has precedence.



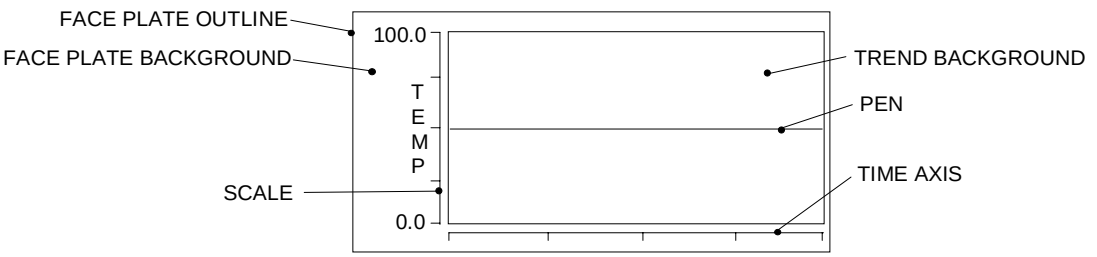
Make Default

If you decide that you want to have all Trend Graphs to appear the same way, you can click the Make Default button in the Trend Graph Settings dialog box. The current settings in the Trend Graph Settings dialog box will be saved. The next time you create a Trend Graph, the saved settings will automatically be applied.

Help

Click the Help button to gain access to help files relating to Trend Graph Settings.

Trend Graph Elements



Alarm Window

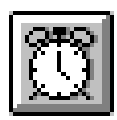
Creating an Alarm Window

The alarm window is used to display alarm messages, which consist of the alarm text message and can include time and date stamps. The alarm window can display Active alarms, Historic alarms or Logged alarms. A typical alarm message is shown below.

```
DATE  TIME  MESSAGE                    ACK   CLEAR
09/18 22:48 ALARM MESSAGE TEXT         22:50 22:52
```

An Alarm Window consists of a legend and multiple lines of alarm text. Touching the alarm window operator causes the alarm manager page to appear. Please refer to the Alarms Guided Tour on page 83 and Alarms on page 68 for more information.

Click the Alarm Window icon on the Tools menu.



Move the cross hair to the top of the two cells where you want the Alarm Window to appear and click the mouse. If you want to size the Alarm Window immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the Alarm Window. Release the mouse button and the Alarm Window is sized. An Alarm Window similar to the one below will appear.

The Alarm Window Settings dialog box will appear next to the alarm window.

Queue

Select Active, Historic, or Logged.

Active Alarms

The alarm is displayed when the trigger event becomes active. The alarm is displayed in the format and color specified in a configuration table. When the alarm is acknowledged, the alarm processor modifies the alarm message with the format and color specified in the configuration table. When the alarm is cleared the message is erased. A common practice is to display the alarm message in red. When the alarm is acknowledged, the alarm color is changed to yellow. For monochrome units, the active alarm is commonly displayed as black text and white background.

Historic Alarms

This type of alarm operates in the same fashion as the active alarm with an important exception. Instead of erasing the alarm message when the trigger event is cleared, the alarm message is modified with the format and the color specified in the configuration table. A common practice is to change the alarm clear message to green.

Logged Alarms

This type of alarm simply copies each alarm event message to a queue using the format and color specified for the alarm. Each alarm event is listed on a separate line.

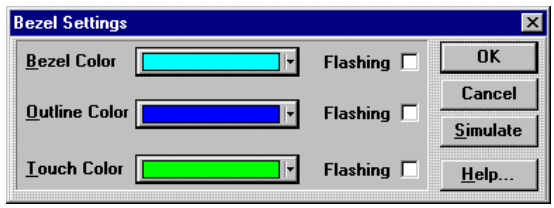
Scroll Direction

The Alarm Window will display messages from the Active, Historic or Logged queues. As new messages are triggered, they will scroll into the alarm window either from the top or the bottom. Setting the scroll direction to *scroll up* will show the latest alarm message on the bottom of the window.

Bezel

You can select the outline and bezel colors for the Alarm Window by clicking the Bezel button. The touch color appears when the operator touches the panel over the Alarm Window. (The alarm processor is so fast, the system screen appears before you get a chance to see the touch color.) Click OK to accept the color selections.

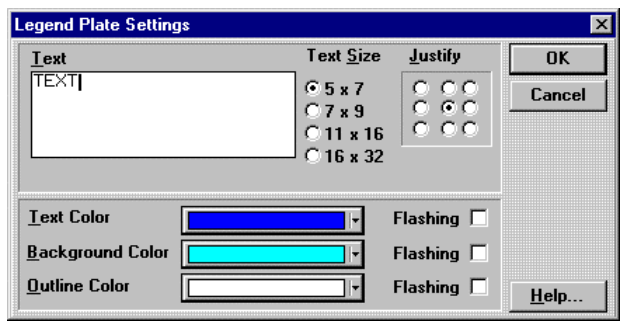
See Appendix D for Color Information.



Legend

You can change the title of the Alarm Window by clicking the legend button and entering the new title. You can change the text color, background color and size of the title text. You can justify the text by clicking one of the Justify radio buttons.

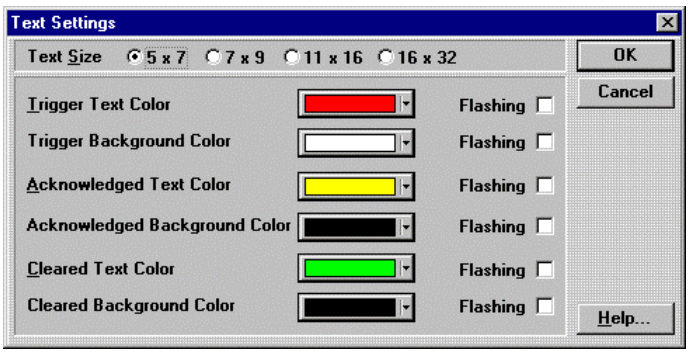
See Appendix D for Color Information.



Text

You can select the color and text size of the alarm message as it will appear in the alarm window. A common practice is to display the active alarm in red, the acknowledged alarm in yellow, and the cleared alarm in green. Remember that the active alarm queue will not contain any cleared alarms. Click the text button to display the Text Settings dialog box.

See Appendix D for Color Information.



OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the Alarm Window Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all Alarm Windows to appear the same way, you can click the Make Default button in the Alarm Window Settings dialog box. The current settings in the Alarm Window Settings dialog box will be saved. The next time you create a Alarm Window, the saved settings will automatically be applied.

Advanced Button

NOTE The Advanced Button is enabled when you select Keyboard Attached in the Touch Screen Configuration dialog in Setup.

Clicking the Advanced button will display the Advanced Settings dialog box. The Alarm Button operation can be assigned to an external keypad. See Keypads, page 262, and Keypad Assignment, page 125, for additional information. Once a keypad is assigned, you can disable the touch screen by checking the *Touch disable* box. If you leave the touch disable box unchecked, then the touch screen and the keypad can both operate the button.

Help

Click the Help button to gain access to help files relating to Alarm Window Settings.

Using the Alarm Window

When you place an alarm window on a panel, it becomes a panel object just like buttons and pilot lights. When an alarm condition occurs, the alarm panel is NOT automatically displayed. You can force the operator to view the Alarm window by using the procedure below.

1. Place an Active Alarm window on a panel. Save the panel and note the panel ID number.

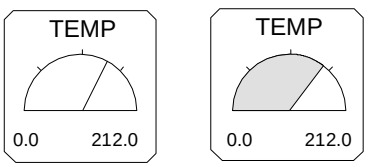
2. Go to the Project Setup menu and click the System setup button. Locate Panel Trigger Tag in the Options section. The Panel Trigger Tag is a register in your PLC that will control which panel will be displayed. This register should contain the ID number of the panel you want to display.

3. Connect the QUICKPANEL to your PLC. The QUICKPANEL will read the PLC register that you assigned as the Panel Trigger Tag register. Move the panel ID number of the alarm screen into the panel trigger tag register and the QUICKPANEL will display the alarm panel.

Analog Meter

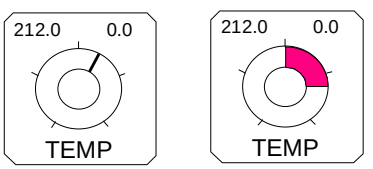
Analog Meter

The new Meter tool allows creation of two analog meters. Since the meters share several common dialog boxes, they are combined into one tool. The default shape for a meter is the 180 degree meter shown below. You can click the filled checkbox to fill the area from the min value to the current value.



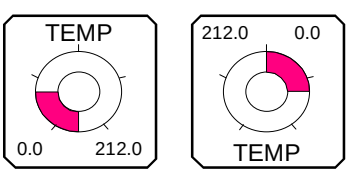
UNFILLED FILLED

The 360 degree meter is shown below. You can click the filled checkbox to fill the area from the min value to the current value.



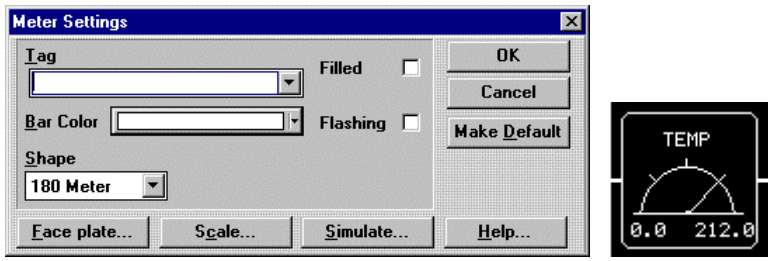
UNFILLED FILLED

When you select the 360 meter, the Orientation list box appears. The 360 degree meter can be selected to have the starting point (min setting) at the top of the meter or the bottom. The bar on the meter face moves clockwise from the min value to the max value.



FILLED BOTTOM TO TOP FILLED TOP TO BOTTOM

To add a Meter to a panel, click the Meter icon in the floating Tools menu. Move the mouse cursor to the panel and observe that the cursor is a cross hair with a meter symbol. Move the cross hair to the cells where you want the meter to appear and click the mouse. The meter face appears on the panel and the Meter Settings dialog appears.



Tag Variable

A "tag" variable name must be assigned to the numeric meter operator. This tag will be a word in the PLC memory that the target display can read.

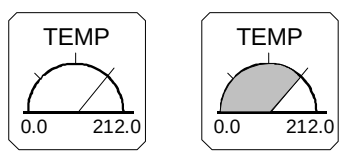
NOTE Any variable assigned to a Meter MUST be a 16 bit integer type variable.

Bar Color

The movable portion of the meter is the bar color, similar to a bar graph. Click the Flashing checkbox for flashing colors.

Filled

The movable portion of the meter is set to be a single line, similar to the needle on a pressure guage. Clicking the Filled checkbox will fill the area from the minimum value to the current value. The fill color is same as the bar color.



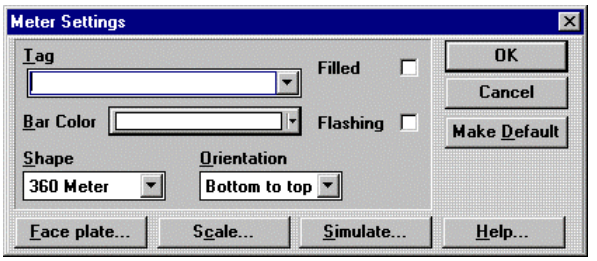
UNFILLED FILLED

Shape

Select either the 180 or the 360 meter. If you selecthe 360 meter, the Orientation list box appears.

Orientation

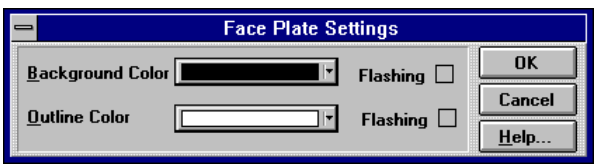
Selecting the 360 meter causes the Orientation dialog to appear.



The 360 degree meter can be selected to have the starting point (min setting) at the top of the meter or the bottom. The bar on the meter face moves clockwise from the min value to the max value. Use Simulate to see the action.

Face Plate

This dialog is used to select a background color and outline color for the meter face plate. The outline color is the outline around the meter face and the outline around the face plate.



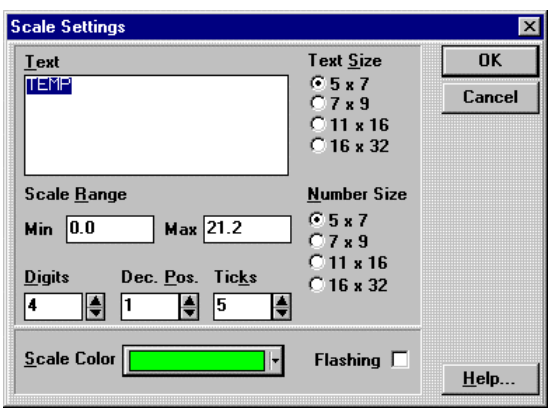
Scale

The Scale Settings menu is used to customize the meter. Enter the Text and select the Text Size to appear on the meter legend. You can have only ONE row of scale text.

Enter the Scale Range, Min (minimum) and Max (maximum) values. Number Size refers to the numbers on the scale. Select the number of Digits and Decimal Positions. A decimal position is the number of digits to the right of the decimal point. The decimal point counts as a digit.

Tick marks are placed around the meter face to delineate the meter into equal segments. Select the number of tick marks for the meter.

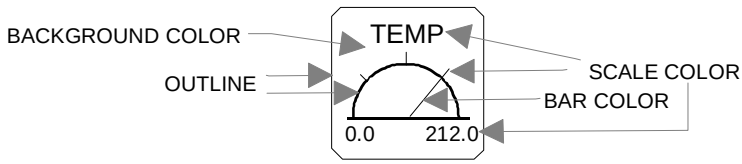
Select the Scale Color and click OK to complete the meter.



Simulate

Simulate allows viewing the meter as the data value is changed between the minimum and maximum values with the scroll bar.

Colors



ASCII Data Entry

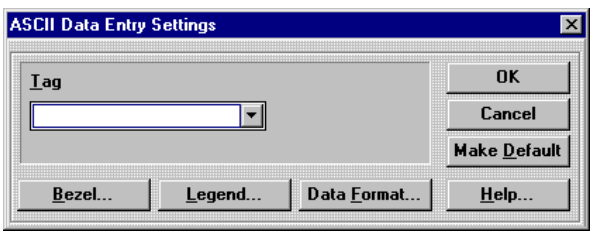
ASCII Data Entry

The ASCII Data Entry tool is used to enter and display ASCII characters using word registers in a PLC.

NOTE: The following protocols do NOT support ASCII Data Entry: Profibus, Interbus-S, DeviceNet, and CANOpen.

Click the ASCII Data Entry icon on the Tools menu. Move the cross hair and the ASCII Data Entry image to the cells where you want the ASCII Data Entry to appear and click the mouse.

The following ASCII Data Entry Settings dialog box will appear.



Tag Variable

A "tag" variable name must be assigned to the ASCII Data Entry. This tag will be a word in the PLC memory that the target display can read and update. A list of valid PLC tags can be found by clicking the QUICK HELP button and locating your PLC type in the PLC Drivers section.

The ASCII Data Entry tool has the option of displaying several ASCII characters. Each PLC word variable can store two ASCII characters. Therefore, if you are going to read/write more than two characters, you must ensure there are additional PLC registers available to accommodate the extra characters. For example, if you intend to use 10 characters, you must make 5 word registers available in the PLC. The tag variable described above is the starting address of the 5 word registers.

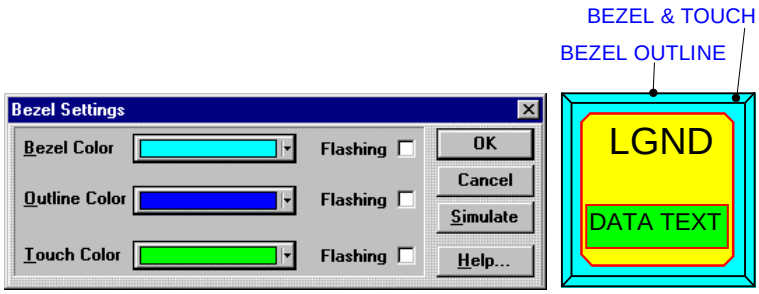
Tags can be edited by clicking the panel object and selecting Change Object Tags (Ctrl+T) from the Edit menu. This will display the Modify Tag Address dialog box. Tag prompts can be added in the Modify Tag Attributes dialog box. You can also add or edit tag prompts by double clicking above the tag field. For more information about changing tag attributes, click the Quick Help button to jump to the main help screen. Follow the path from QuickDesigner, Menu commands, Edit menu, to Change Object Tags.

Bezel

The Bezel portion of the ASCII Data Entry is used to give a visual indication to the operator that the button was pressed. The Bezel Color changes to the Touch Color when the button is pressed. The outline color remains constant whether the push button is pressed or not pressed.

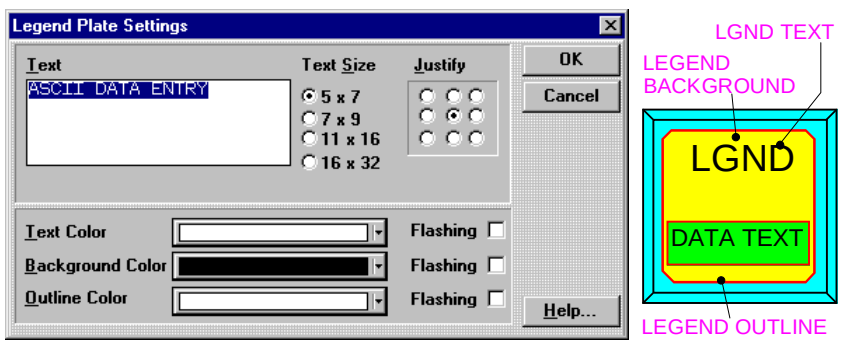
The bezel, outline, and touch color can be modified to enhance the visual impact of the ASCII Data Entry button.

Press the Simulate button to observe the action of the bezel color change.



Legend Plate

The legend plate allows you to provide text information to the operator about the meaning of the current ASCII characters being displayed. You can change the Text Size by clicking one of the Text Size radio buttons. Justify text by clicking one of the Justify buttons. Select a solid or flashing color for the text, the legend background, and the legend outline. Click OK to apply the changes and return to the settings dialog.



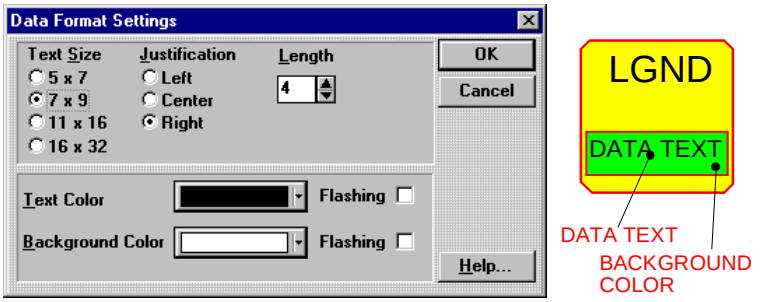
Data Format Settings

The data format window allows setting up the display information.

Text Size: Font Size of the text characters expressed as pixels. Smaller text allows more characters in the text field.

Justification: Determines if the text characters are forced to the Left, Right, or Center.

Length: Selects the number of characters to display in the data field. You must have sufficient registers in your PLC to store the ASCII characters. Each PLC word register can store 2 ASCII characters. In the example below, the Length is set to 4, therefore you need 2 PLC word registers.



OK

Click the OK button to apply the information in the settings dialog box and close it.

Cancel

Cancel all changes to the ASCII Data Entry Settings dialog box and exit the dialog box.

Make Default

If you decide that you want to have all ASCII data entry buttons appear the same way, you can click the Make Default button in the ASCII Data Entry Settings dialog box. The current settings in the ASCII Data Entry Settings dialog box will be saved. The next time you create a ASCII Data Entry button, the saved settings will automatically be applied.

Help

Click the Help button to gain access to help files relating to ASCII Data Entry Settings.

ASCII Text Entry Panel

When the ASCII Data Entry push button is pressed, an ASCII data entry panel (keypad) will be displayed.

The date entry panel will appear in various formats, based on the size of the display.

The drawings below are for 5" ans 6" displays. There are nine panels that display characters A-Z, a-z, numbers, and symbols. To view a different panel of characters, press the Prev or Next keypads. To enter a character, press the desired character keypad then the Enter keypad. Use the cursor keypads << and >>, and the Del keypad to edit the character string. Use the Clear keypad to remove all characters from the Enter Value field. When all characters are entered, press the Done keypad.

The first keypads to appear are the caps, from A to K.

ASCII DATA ENTRY

Current Value: ABCD

Enter Value: ABCD

<<	>>	Del	Clear	Prev
A	B	C	D	Next
E	F	G	H	Enter
I	J	K	SP	Done

As you press the Next and Prev keypads, the panels will present different sets of characters. Here is a panel with small characters and some numbers.

<<	>>	Del	Clear	Prev
s	t	u	v	Next
w	x	y	z	Enter
1	2	3	SP	Done

The following drawings are for displays larger than 6". The default selection is all CAPS. You can select lower case (a-z), symbols (SYM), or numbers (NUM). As you press a keypad, the ASCII characters will be displayed in the Enter value field. Pressing the Done keypad will move the ASCII characters to the Current value field and to the PLC register.

A	B				
C	D	E	F	G	a-z
H	I	J	K	L	SYM
M	N	O	P	Q	NUM
R	S	T	U	V	Enter
W	X	Y	Z	BK SP	Done

This is a picture of the numeric keypad (NUM).

1	2	3	4	A-Z
5	6	7	8	a-z
9	0	+	-	SYM
*	/	%	#	Enter
<	>	=	BK SP	Done

This is a picture of the symbols keypad (SYM).

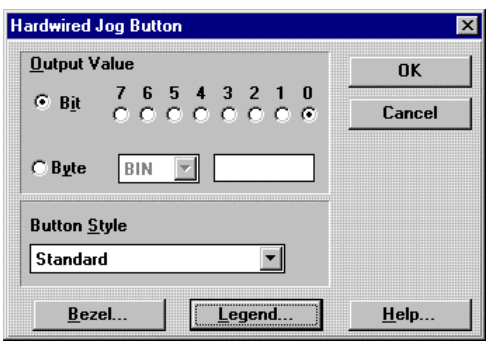
"	SP	$	&	'	A-Z
,	(	)	.	:	a-z
;	?	@	[	]	NUM
\	^	`	{	}	Enter
|	-	~	!	BK SP	Done

Jog Button

Creating a Hardwired Jog Button

The Hardwired Jog Button is a panel button connected directly to the Auxiliary Port. You can have a jog button toggle a single bit or multiple bits. The output of the Auxiliary Port can then be used for jog functions, since it will toggle in response to pressing the panel button.

Click the Hardwired Jog button icon on the Tools menu. Move the cross hair to the top of the two cells where you want the Hardwired Jog button to appear and click the mouse.



Output Value

To toggle a single bit, check the BIT option in the Hardwired Jog Button dialog. Select a bit to toggle then click OK. When you download the panel, the button will appear in the normal off condition. Pressing the button will turn the bit ON. The associated pin on the Auxiliary Port will be enabled. Bit numbers and associated Auxiliary Port pin assignments are shown in the following table.

To toggle multiple bits, check the BYTE option and enter the 8-bit binary byte in the data entry box. Now when the Hardwired Jog Button is pressed, each bit position in the binary byte that was a 1 will toggle the associated output bit. For example, the binary byte 00100101 will toggle bit 0, bit 2, and bit 5.

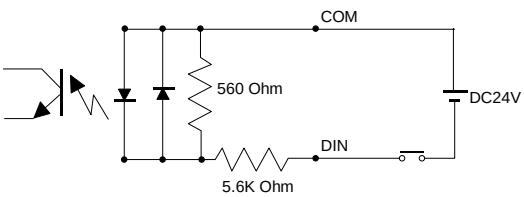
Auxiliary Port Pin Assignments

Pin #	Pin Name	Description
1	TSW0	Touch Switch Output 0 (Bit 0)
2	TSW1	Touch Switch Output 1 (Bit 1)
3	TSW2	Touch Switch Output 2 (Bit 2)
4	TSW3	Touch Switch Output 3 (Bit 3)
5	TSW4	Touch Switch Output 4 (Bit 4)

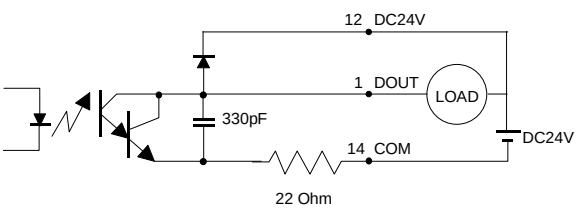
6	TSW5	Touch Switch Output 5 (Bit 5)
7	TSW6	Touch Switch Output 6 (Bit 6)
8	TSW7	Touch Switch Output 7 (Bit 7)
9	RUN	ON During RUN
10	ALARM	Alarm Output (Note 1)
11	BUZZ	Buzzer Output
12	DC24V	Output – Common (DC24V)
13	AIN – C	Input – Common (DC24V)
14	AOUT – C	Output – Common (GND)
15	RESET	Reset Input

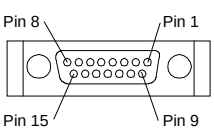
Note 1: Hardware Alarm (Screen Memory Checksum Error) or Software Alarm (System Error).

INPUT CIRCUIT



OUTPUT CIRCUIT



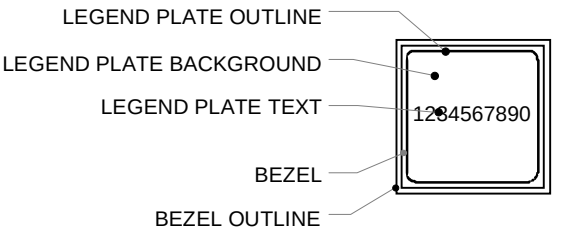


Button Style

The Button Style list box is used to select the style of the button. Select Standard, Circular, Simple or None. For more information see the button styles in the Related Items section at the bottom of the help window.

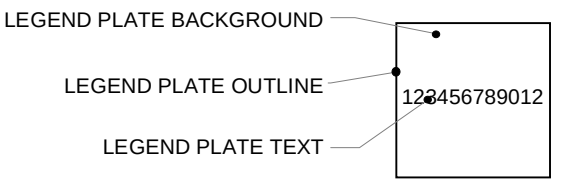
Standard Button

The elements of the standard button are shown below. The standard button consists of a bezel and legend plate. The bezel is the frame around the legend plate. The bezel can be one color when the button is idle and a different color when the button is touched. The bezel color, the touch color and the bezel outline color can be changed. The legend plate contains the text and the background. The text color, legend plate background color and legend plate outline colors can be changed. There are several text sizes available.



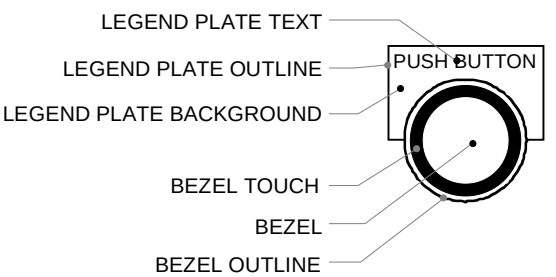
Simple Button

The elements of the simple button are shown below. The simple button is similar to the standard button except it has no bezel. The simple button is a legend plate and text. The text color, legend plate background color and legend plate outline colors can be changed. There are several text sizes available. The simple button has more room for text characters than the standard button.



Circular Button

The elements of the circular button are shown below. The circular button consists of a bezel and legend plate. The bezel is the circular section in the center of the button. The ring around the bezel is the touch indicator. The touch indicator can be one color when the button is idle and a different color when the button is touched. The bezel color, the touch color and the bezel outline color can be changed. The legend plate contains the text and the background. The text color, legend plate background color and legend plate outline colors can be changed. There are several text sizes available.



None Button

The None style button has no bezel or legend plate, which makes it invisible on the panel. When you select the None style, both the Bezel and Legend buttons are greyed out.

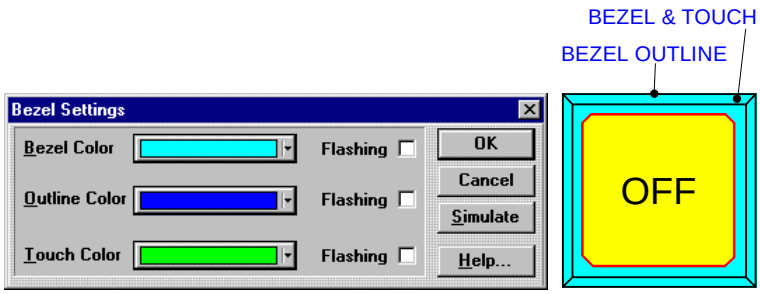
Bezel Settings

The simple button has no bezel.

When using a standard button, the bezel portion of the button will change color when the button is pressed.

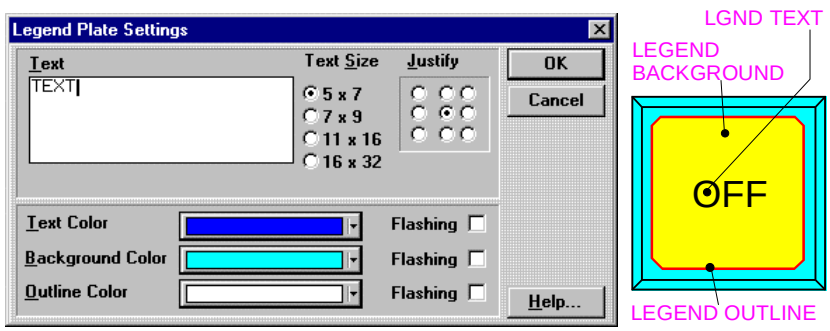
A circular button has a separate bezel and touch indicator. The bezel on a circular button is the center area of the button. The ring around the center is the touch indicator. The outline color remains constant whether the button is pressed or not.

Press the Simulate button to observe the action of the bezel color change.



Legend Plate Settings

The legend plate allows you to provide text information to the operator about the action that will occur when the button is pressed . This text is constant and will not change when the button is pressed. Enter the text message in the Text box and select the text size by clicking one of the radio buttons in Text Size. Justify the text by clicking a button in Justify. Select a solid or flashing Text, Background, and Outline color. There is more room for text on a simple button than on a standard button. Click OK to apply the selections and close the dialog box.



OK

Click the OK button to apply the information in the settings menu and close the menu.

Cancel

Cancel all changes to the Hardwired Jog Button dialog box and exit the dialog box.

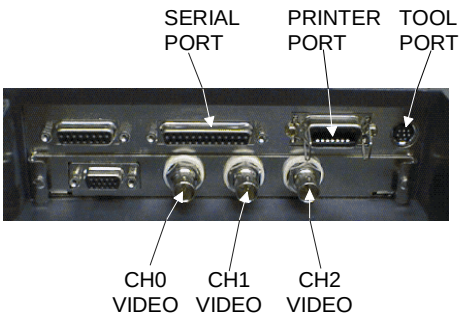
Help

Click the Help button to gain access to help files relating to Hardwired Jog Button Settings.

Video Display

Video Inputs

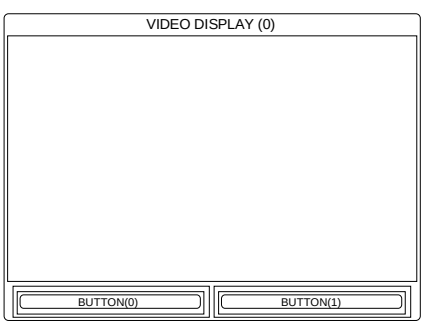
The Video QuickPanel has the standard serial, printer and tool ports. It also has three NTSC BNC video inputs. The following drawing shows the location of the ports and input connectors.



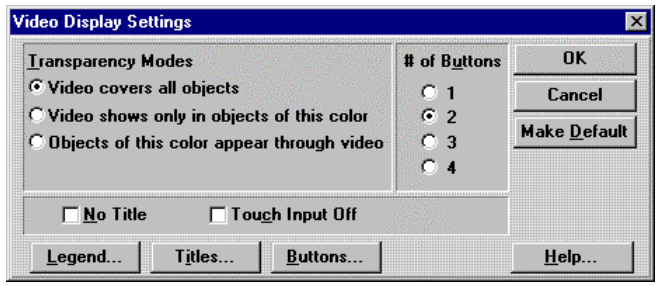
The video source must be NTSC. The video output from a camcorder or VCR is usually an RCA phono plug type connector. An easy way to connect these video sources is by adding an RF adapter to the Video QuickPanel. A typical phono plug to BNC connector can be found at a local Radio Shack under the part number 278-254. Also, many computer stores sell BNC cables for use in networks. These cables can be used to connect video signals that require BNC style connectors.

Video Display

To add a video operator to a panel, select the video icon from the floating tools menu. Move the cursor to the panel area where the video will appear and click the mouse. The video will be displayed in a 300W x 200H area, along with operator buttons and legend data. A sample video display with two buttons is shown below.



The following Video Display Settings dialog is displayed.

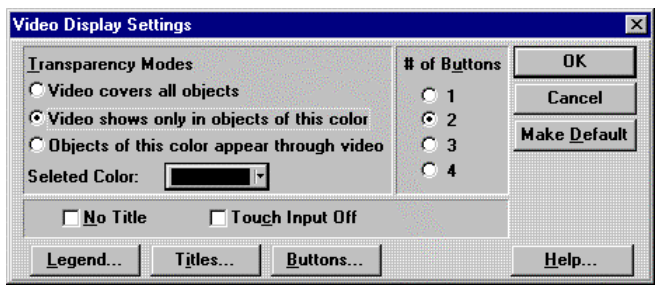


Transparency Modes

Three modes are available for displaying the video. The options allow for a wide range of display options and panel design functionality.

In the *Video covers all objects mode*, the video appears over all objects. You can hide a button behind the display.

When you select *Objects of this color appear through video* or *Video shows only in objects of this color* mode, the Video Display Settings dialog changes to show a color selection option.



In the *Video shows only in objects of this color* mode, the video will be seen only when an object of the selected color is in front of the video display (the object must be placed in the foreground). For example, if you create a push button with a red legend plate and the selected color is red, then the video will only be shown on the legend plate. The video will not appear on parts of the push button that have a different color.

In the *Objects of this color appear through video* mode, any object of the selected color will appear on the video display. For example, if you create a push button with a green bezel, and the selected color is green, then the bezel part of the button will be seen on the video display.

NOTE In order for objects to work with transparency, they must be placed in the foreground, or in front of the video display.

Number of Buttons

Select the number of buttons that will appear in the video display legend. The buttons are located below the video display and will size as the legend plate is sized. The video display will always remain 300x200 pixels. The buttons select different video sources. Each button has its own legend plate with title.

No Title

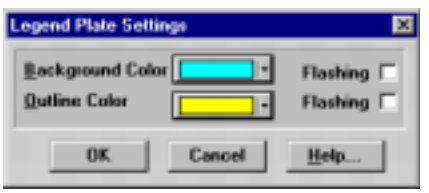
Click on the *No Title* checkbox to remove the title from the legend plate.

Touch Input Off

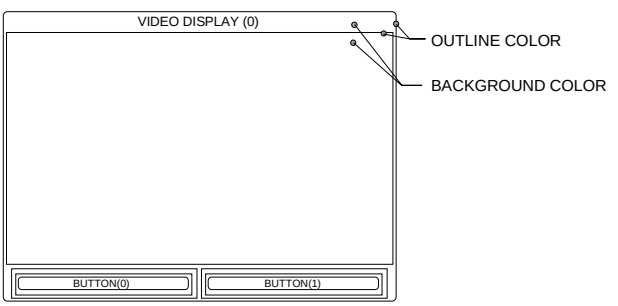
Click on *Touch Input Off* to turn off the touch screen in front of the video display. This does not effect objects around the video display window.

Legend Plate Settings

You can change the background and outline colors of the video display legend. Click the *Legend* button to display the following dialog box.

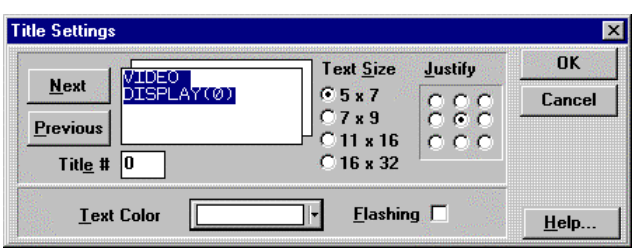


The background and outline sections are shown in the next drawing.

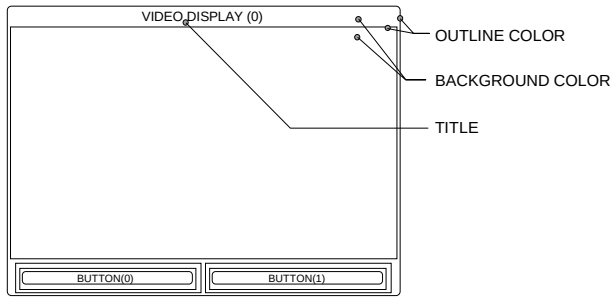


Titles

Click the *Titles* button to display the Title Settings dialog box. The number of buttons selected will determine the number of legend plates.

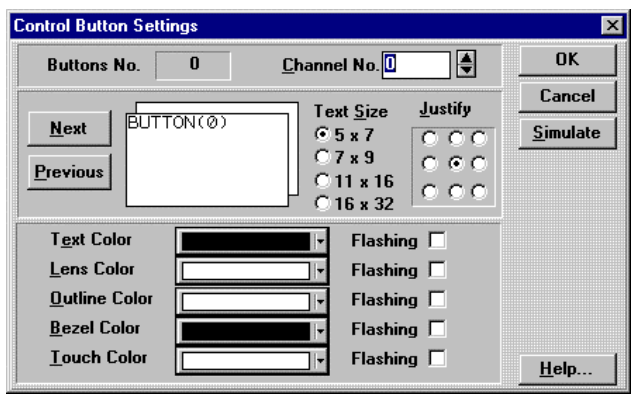


In the next drawing, two buttons have been selected. Pressing button 0 will display legend plate 0, and button 1 will display legend plate 1. You can customize the title for each legend plate.



Buttons

Click *Buttons* to display the Control Button Settings dialog. This dialog is used to setup the buttons that appear below the video display. The buttons select which video source channel is being displayed. You can customize the buttons for your application.

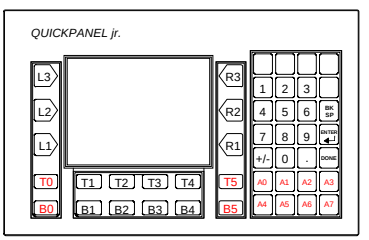


The *Buttons No.* information box displays the assigned button number. The *Channel No.* list box selects the video source for the assigned button. Each button can select from CH0, CH1, or CH2. Although the spin controls allow selection of CH3, it is not used in this product.

Keypads

Keypads Overview

The keypad option adds external keypads that surround the touch screen. The keypads are used in place of the touch screen or along with the touch screen. For example, instead of touching the QuickPanel screen to activate a Push Button, you can press an external keypad. You can also assign an external keypad to simulate a push button, selector switch, goto panel button, numeric data entry, print button or word button. Simulating operators saves screen space.



Keypad installation information can be found in the Hardware Reference manual, part number 800-1000-082. The Keypad option must be installed in order to use the keypad assignments.

The following panel operators (ones with a bezel) can be assigned to external keypads:

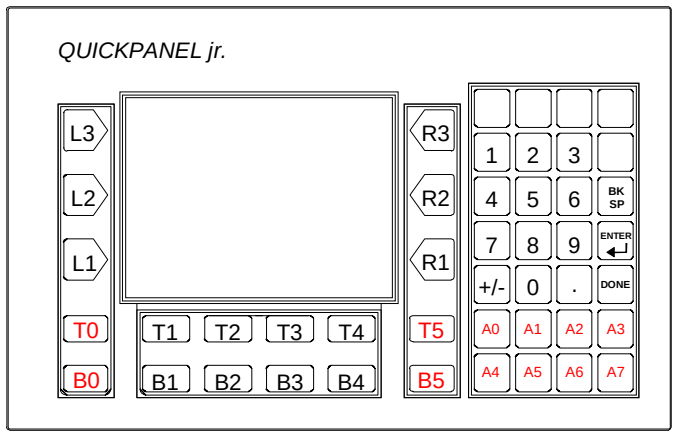
- Push Button
- Illuminated Push Button
- Numeric Data Entry (with external numeric keypad)
- Selector Switch
- Word Button
- Goto Panel Button
- Print Button
- Alarms

The addition of external keypads to the standard touch screen allows several options. For example, a Push Button can:

- work normally without using an external keypad.
- be assigned to an external keypad.
- work normally and with an external keypad.
- be simulated by a keypad but not appear on the touch screen.

Keypad Layout

The diagram below shows the physical layout of the keypads. The keypad designations are PERMANENTLY assigned, but the physical legends can be changed to suit your application. That is, L3 will always be in the same location, but the legend for L3 can be changed. Some of the keypad designations do not appear on the keypads. They are included in the drawing for reference. The unmarked keypads are T0, B0, T5, B5, and A0 through A7.



Keypad Names

The keypads are divided into Reserved keys and Programmable keys.

The first series of keypads are the ones on the LEFT and RIGHT sides of the display. The keypads are designated L1 for LEFT 1, R2 for RIGHT 2, and so on.

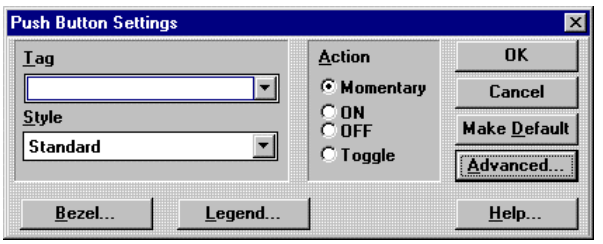
The next series of keypads are two rows of keypads below the display. The top row of keypads are designated T0 for TOP 0, T1 for TOP 1, B0 for BOTTOM 0 and so on.

The final group of programmable keypads are located below the numeric keypads and are designated A0 through A7.

The numeric keypads, including the blank keys above the numeric keypads cannot be assigned and are designated as Reserved.

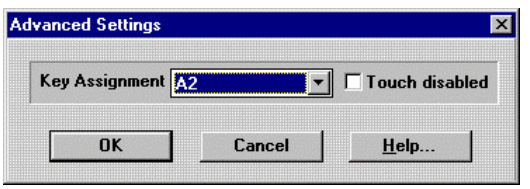
Assigning Keypads

You can assign a keypad to a button by clicking the Advanced button in the settings dialog. Shown below is the Advanced button in the Push Button Settings dialog.



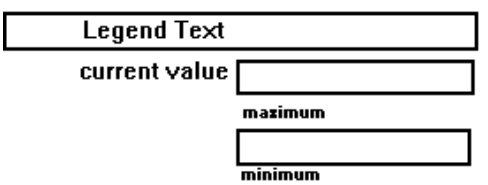
Clicking the Advanced button displays the Advanced Settings dialog box. In the following example, the Push Button was assigned to keypad A2. Once a button is given a Key Assignment, the *Touch disabled* checkbox becomes active. A button object can be connected to the touch screen and the keypad simultaneously. If you check the *Touch disabled* checkbox, the touch screen will be disabled for the button and the button will only work with the assigned external keypad.

A list of all keypad assignments can be displayed by going to the Tools menu and selecting Keypad Assignments.



Keypads and Numeric Data Entry

When a keypad is assigned to a Numeric Data Entry button, the data entry keypad on the touch screen and the external numeric keypad operate the same. If you disable the touch screen, the data entry keypad no longer appears on the touch screen. Only the legend text, data entry fields and the min/max fields appear as illustrated below. You must use the external numeric keypad to enter data.

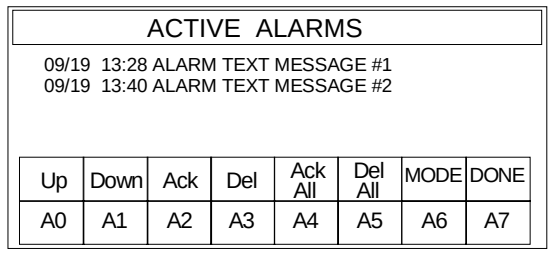


If you disable the touch screen for the Numeric Data Entry operator you cannot activate the Numeric Data Entry button by touching the screen. The only way to activate the button is by pressing the assigned keypad. The shortened version of the data entry screen is displayed. The external numeric keypads are used to enter data.

Keypads and Alarms

When an alarm is triggered, the alarm message appears on the panel in an alarm window. The operator touches the screen to activate the alarm management page shown below. If you assign a keypad to an Alarm window, the alarm management page will have an additional row showing keypad assignments.

The alarm management page function keys (Up, Down, Ack, etc.) will now have permanent keypad assignments. Up is A0, Del is A3 and so on. The touch screen and the keypads work in parallel. If the touch screen is disabled, only the keypads will operate the alarm page functions.

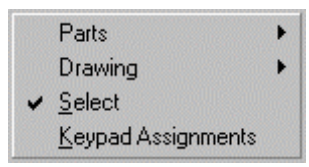


Simulating Panel Objects with Keypads

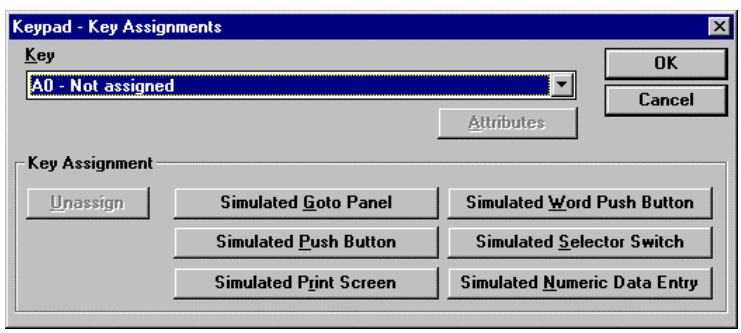
You can assign a keypad to simulate a panel object, even though there is no panel object visible on the screen. You can assign one of the keypads to simulate the following panel operators:

- Push Button
- Goto Panel Button
- Print Button
- Word Button
- Selector Switch
- Numeric Data Entry

To create a simulated panel object, go to the TOOLS menu and select Keypad Assignments.

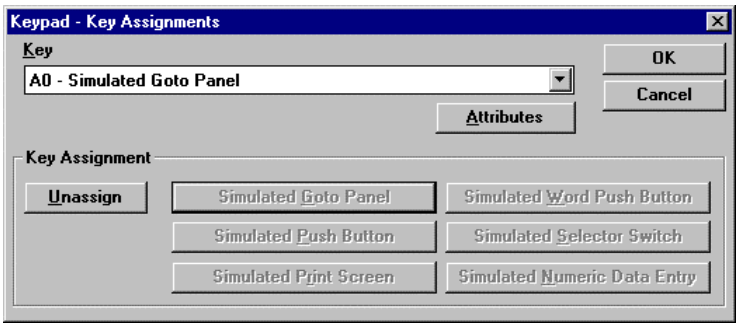


The keypad key assignment dialog box appears.



The first operation is to select which keypad will be assigned to the simulated panel operator. Click the down arrow in the Key list box then click an unassigned keypad.

Next, select one of the operators to simulate by clicking a button in the Key Assignment area. When you click one of the simulate keys, the rest of the buttons will be grayed out.



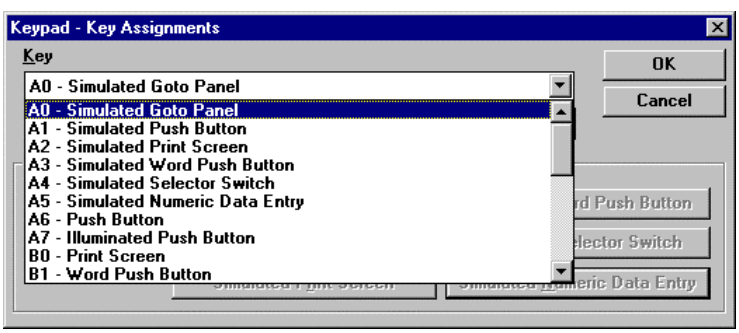
Click the Attributes button to open the settings dialog for the selected item. In this example, clicking the Attributes button will open the Goto Panel settings dialog. Enter the Panel Name and click the OK button.

Now when you press the A0 keypad, the panel name you selected will be displayed. This is the same operation as the Goto Panel Button, but without the panel operator taking up screen space.

Keypad Assignments

You can view all the keypad assignments by going to the Tools menu, selecting Keypad assignments, then selecting the Key list box. You can change the attributes of any simulated operator by selecting the keypad from the list, then clicking te Attributes button.

Note that simulated operators are marked as *Simulated*.


Keypad - Key Assignments
Key
A0 - Simulated Goto Panel
OK
Cancel
A0 - Simulated Goto Panel
A1 - Simulated Push Button
A2 - Simulated Print Screen
A3 - Simulated Word Push Button
A4 - Simulated Selector Switch
A5 - Simulated Numeric Data Entry
A6 - Push Button
A7 - Illuminated Push Button
B0 - Print Screen
B1 - Word Push Button

Viewing Keypad Assignments

To view the keypad assignments, go to the View menu and click the Object Key Display. The keypad tag display is similar to the object tag display.

The keypad tag is displayed in the bottom left corner of the operator and provides a quick visual check to see which panel operators have keypads assigned.

Appendix A: Character Map

Character Map

The QuickPanel has a built-in character set. Many of the special characters available in the character set cannot be entered directly from the keyboard.

To enter a special character, locate the character and the associated code in the table below. The Code column shows which key or key combinations to use to insert the associated character. For example, if the Code is Alt+0129, then press and hold the Alt key while entering 0129 from the *Numeric* keypad. Make sure the NUM LOCK key is ON so the keypad functions as a Numeric keypad.

The following table shows the character map for a QP2. (This table has embedded fonts.)

Char	Code	Char	Code	Char	Code	Char	Code
!	Keyboard	"	Keyboard	#	Keyboard	$	Keyboard
%	Keyboard	&	Keyboard	'	Keyboard	(	Keyboard
)	Keyboard	*	Keyboard	+	Keyboard	,	Keyboard
-	Keyboard	.	Keyboard	/	Keyboard	0	Keyboard
1	Keyboard	2	Keyboard	3	Keyboard	4	Keyboard
5	Keyboard	6	Keyboard	7	Keyboard	8	Keyboard
9	Keyboard	:	Keyboard	;	Keyboard	<	Keyboard
=	Keyboard	>	Keyboard	?	Keyboard	@	Keyboard
A	Keyboard	B	Keyboard	C	Keyboard	D	Keyboard
E	Keyboard	F	Keyboard	G	Keyboard	H	Keyboard
I	Keyboard	J	Keyboard	K	Keyboard	L	Keyboard
M	Keyboard	N	Keyboard	O	Keyboard	P	Keyboard
Q	Keyboard	R	Keyboard	S	Keyboard	T	Keyboard
U	Keyboard	V	Keyboard	W	Keyboard	X	Keyboard
Y	Keyboard	Z	Keyboard	[	Keyboard	\	Keyboard
]	Keyboard	^	Keyboard	_	Keyboard	`	Keyboard
a	Keyboard	b	Keyboard	c	Keyboard	d	Keyboard
e	Keyboard	f	Keyboard	g	Keyboard	h	Keyboard
i	Keyboard	j	Keyboard	k	Keyboard	l	Keyboard
m	Keyboard	n	Keyboard	o	Keyboard	p	Keyboard
q	Keyboard	r	Keyboard	s	Keyboard	t	Keyboard
u	Keyboard	v	Keyboard	w	Keyboard	x	Keyboard
y	Keyboard	z	Keyboard	{	Keyboard	|	Keyboard
}	Keyboard	~	Keyboard	^⊗ (1)	Ctrl+|		Ctrl+2

	Alt+0129		Alt+0130		Alt+0131		Alt+0132
	Alt+0133		Alt+0134		Alt+0135		Alt+0136
	Alt+0137		Alt+0138		Alt+0139		Alt+0140
	Alt+0141		Alt+0142		Alt+0143		Alt+0144
	Alt+0145		Alt+0146		Alt+0147		Alt+0148
	Alt+0149		Alt+0150		Alt+0151		Alt+0152
	Alt+0153		Alt+0154	ø	Alt+0155		Alt+0156
Ø	Alt+0157	x	Alt+0158	*f*	Alt+0159		
á	Alt+0160	ℵ	Alt+0161	′	Alt+0162	≤	Alt+0163
⁄	Alt+0164	∞	Alt+0165	ª	Alt+0166	º	Alt+0167
♦	Alt+0168	®	Alt+0169	♠	Alt+0170	↔	Alt+0171
←	Alt+0172	↑	Alt+0173	→	Alt+0174	↓	Alt+0175
°	Alt+0176	±	Alt+0177	″	Alt+0178	≥	Alt+0179
×	Alt+0180	Á	Alt+0181	Â	Alt+0182	À	Alt+0183
©	Alt+0184	≠	Alt+0185	≡	Alt+0186	≈	Alt+0187
…	Alt+0188	¢	Alt+0189	¥	Alt+0190	↵	Alt+0191
ℵ	Alt+0192	ℑ	Alt+0193	ℜ	Alt+0194	℘	Alt+0195
⊗	Alt+0196	⊕	Alt+0197	ã	Alt+0198	Ã	Alt+0199
∪	Alt+0200	⊃	Alt+0201	⊇	Alt+0202	⊄	Alt+0203
⊂	Alt+0204	⊆	Alt+0205	∈	Alt+0206	¤	Alt+0207
ó [(2)]	Alt+0208	Ð	Alt+0209	Ê	Alt+0210	Ë	Alt+0211
È	Alt+0212	"	Alt+0213	Í	Alt+0214	Î	Alt+0215
Ï	Alt+0216	∧	Alt+0217	∨	Alt+0218	⇔	Alt+0219
⇐	Alt+0220	¦	Alt+0221	Ì	Alt+0222	⇓	Alt+0223
Ó	Alt+0224	⟨	Alt+0225	Ô	Alt+0226	Ò	Alt+0227
õ	Alt+0228	Õ	Alt+0229	µ	Alt+0230	Þ	Alt+0231
þ	Alt+0232	ú	Alt+0233	û	Alt+0234	ù	Alt+0235
ý	Alt+0236	Ý	Alt+0237	¯	Alt+0238	´	Alt+0239
¯	Alt+0240	±	Alt+0241	=	Alt+0242	¾	Alt+0243
¶	Alt+0244	§	Alt+0245	⎞	Alt+0246	~	Alt+0247
⎠	Alt+0248	¨	Alt+0249	⎜	Alt+0250	¹	Alt+0251
³	Alt+0252	²	Alt+0253	⎝	Alt+0254		Alt+0255

Note 1. The character created with Ctrl+| is not available as a printable font. The two characters shown in the box can be combined to create a character similar to what is displayed on the QuickPanel.

Note 2. The character created with Alt+0208 is not available as a printable font. The character shown is similar to what is displayed on the QuickPanel.

ppendix B: Print Options

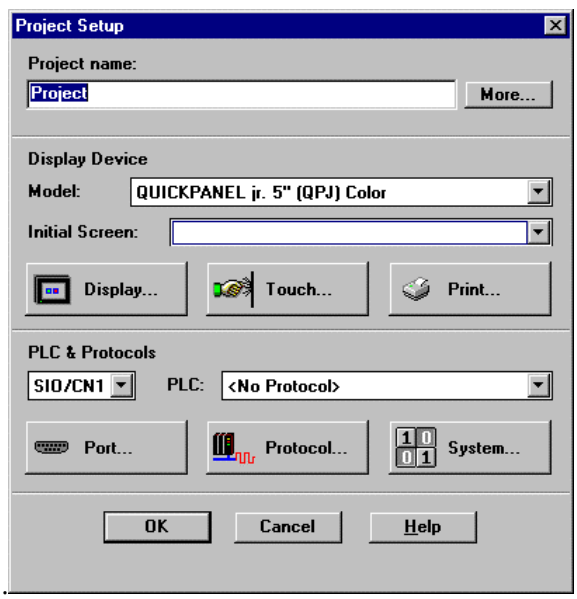
QuickPanel Print Options

All QuickPanels are equipped with a download port which is used to download application files from a computer. This port is also used to print Alarm messages and screen images. Some units have an optional Parallel port which is used to print *only* screen images. The information in this document describes how to select and configure a printer for operation with a QuickPanel.

Printer Select

The first step is to select a printer. This is done in the Project Setup dialog box.

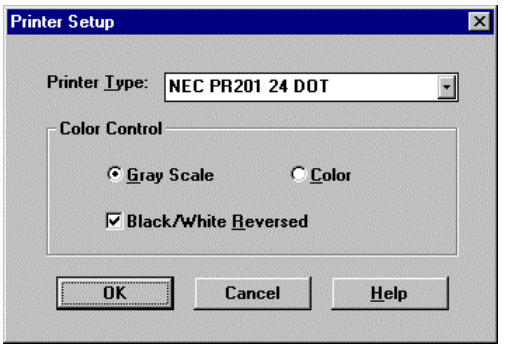
The Project Setup dialog box can be selected in three ways; click the Setup icon in the tool bar, select Setup from the Project menu, or click the Setup button.



From the Setup dialog box, click the Print button. The Print button brings up the printer setup dialog box. Select the printer protocol (or driver) type from the list box. The current selections are:

NEC PR201 24 DOT	(Dot Matrix)
EPSON ESC/P 24-Pin [High Quality]	(Dot Matrix)
EPSON ESC/P 24-Pin [High Speed]	(Dot Matrix)
HP LaserJet II	(Laser)

Other printers may work if they are compatible to one of the printer drivers in the list box.



Serial or Parallel

The next step is to determine if you are going to use the serial port or the parallel port. The selection depends on the type of printer you have. See the selection table below.

	QPJ-2 and QPK-2/3	**QPI-2 and QPL-2**		**QPI-3**	
	Serial Port Only	Serial Port	Parallel Port	Serial Port	Parallel Port
Alarms	YES	YES	YES	YES	YES
Print Screen	YES	YES	YES	NO	YES
Cable	HMI-CAB-105	HMI-CAB-105	HMI-CAB-99	HMI-CAB-105	HMI-CAB-99
Printer Port Setting	Tool/CN3	Tool/CN3	Parallel	Tool/CN3	Parallel

NOTE Laser printers may not print alarms until the print page buffer is full. Dot matrix printers will print alarms as they are triggered.

NOTE Screen prints on dot matrix printers may take a long time.

NOTE Alarm messages must be formatted to print properly. See the Alarms section of the user manual for details on formatting alarm messages.

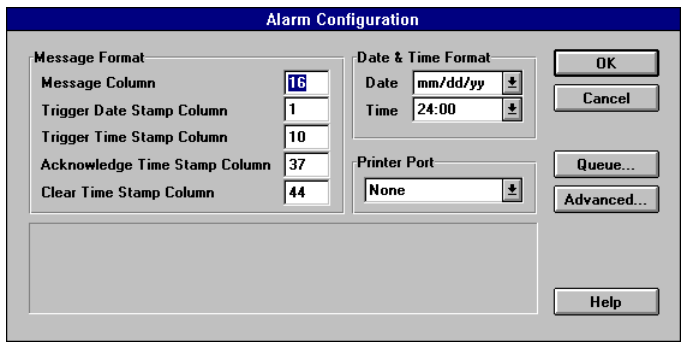
NOTE Screen prints are activated by placing a Print Screen tool on any screen or by using the Print Trigger tag in the System Configuration dialog box.

Port Selection

The next step is to set the Printer Port for serial (Tool/CN3) or parallel operation. The common name for the serial port is the Tool port. On many displays, the Tool port is also marked CN3.

The Printer Port selection is found in the Alarm Configuration dialog box. To get to this dialog box, click Alarms in the main menu to open the Alarms window, then click the Config button.

The Alarm Configuration dialog is shown below.



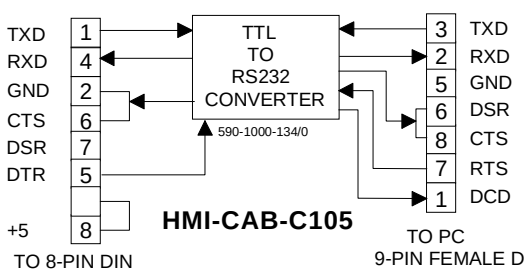
Printer Port

The Printer Port combo box allows selection of a serial or parallel port for printing alarms, or you can select None to disable printing alarms. The parallel port selection will only appear when a display model that has a parallel port is selected in the Project Setup dialog box.

Serial Cable

The Tool/CN3 port is an 8-pin mini-DIN style connector. The Tool/CN3 port, also known as the download port, has two functions. The primary use is to download application files from a computer to the target display. The secondary use is to print alarm messages to a serial printer.

The Tool/CN3 port uses TTL signal levels and requires conversion to RS232. The HMI-CAB-C105 cable will convert the TTL signals to RS232. This cable is equipped with a 9-pin D connector that is AT compatible. The download port connector is an 8-pin mini-DIN style. The port settings are fixed at 9600 Baud, 8 bits, no parity. The pin assignments are shown in the following drawing.



PROPRIETARY INFORMATION

THIS INFORMATION IS PROVIDED AS A CONVENIENCE TO OUR CUSTOMERS. YOU ARE NOT AUTHORIZED TO CONSTRUCT THIS CABLE. UNAUTHORIZED CABLES ARE NOT SUPPORTED BY TOTAL CONTROL.

Parallel Cable

The parallel port cable is the HMI-CAB-C99. This cable has a 14 pin mini-Centronics connector on one end and a standard 36 pin Centronics compatible connector on the other. The 14 pin mini connector connects to the parallel port on the display. See the cable diagram on page 78.

Appendix C: Troubleshooting Guide

Installation Issues:

1. During the installation of QuickDesigner, the error message appears *"Severe!, *.dll is in use…close down all program …"*

a. This usually occurs when QuickDesigner is being installed on a computer that has other software packages running in the background. These other software packages may be using some Windows *. DLLs that are needed by the QuickDesigner installation program. MSOffice is a big culprit because although the MSOffice programs are not running, the MS Offfice group icons are usually running and can be found at the top right corner of the computer screen. Close the icon bar then restart the installation procedure.

b. Any Windows based software package that is running during the QuickDesigner installation should be shut down also.

Windows 95/NT—Press **Ctrl+Alt+Del** keys to bring up the **Close Program** box. Select those programs that are currently running then press the **End Task** button.

Windows 3.1/3.11—Press **Ctrl+Esc** keys to bring up the **Task List**. Select those programs that are currently running then press the **End Task** button.

2. During the installation from the CD, a message appears stating "<u>This movie requires the following Xtras: DirectOS-Rx32, Sound import/exportx32, MIX32X32</u>"

This message may then be followed by another message that reads:

"<u>Script error handler not defined…..</u>"read#…"

a. If this issue occurs, manually load the software by selecting the CD drive, then double-click the *install* folder. Select the *disk 1* folder from the install folder and click the Setup.exe file. This will launch the InstallShield for the QuickDesigner 3.x installation.

3. After installing the software, QuickDesigner is launched from the icon and the message

"The following database cannot be found:

c:*directory name*\Medusa.ini

"Unable to open database c:*directory name*\Medusa.ini

a. The QuickDesigner directory name that was given during the installation was more than 8 characters long. The software should be reinstalled under a directory name that is 8 characters or less (ex. c:\Quick or c:\xxx\Quick3).

b. If the complete path name given during the install was more than 47 characters, then this error will occur. (ex. c:\develop\projects\plc\interface\programs\tcp\software\quick)

Software Issues

1. When trying to open a project for editing, the message *"This project is already in use" appears.*

See Project in Use on page 53.

2. When trying to enter the Panels area of QuickDesigner, the message *"Cannot open...."*

Close QuickDesigner software. Go to File Manager (Win 3.x) or Explorer (Win 95) and delete the file QMGR.INI from the installed QuickDesigner directory (usually c:/quick#). Go back to QuickDesigner and then open the Panels area.

3. How do you determine how large the QuickPanel application is?

Start the download process (you do not have to be connected to a QuickPanel). This initializes the software compiler. When Quick Courier is displayed, exit out of the download. Check the size of the GPC.A file in your QuickDesigner directory. This can be done through File Manager for Windows 3.1/3.11 or Explorer in Windows 95.

Model number	Approx. application memory
QPJ-2D100-x2P	~ 240 Kbytes
QPK-2D100-x2P	~920 - 930 Kbytes
QPI-2x100-y2P	~920 - 930 Kbytes
QPL-2xy0-C2P	~1.5 – 1.6 Mbytes

4. When importing a project, an error message appears saying *"Error! Cannot set Tag to db."*

a. This indicates that the software had some problems rebuilding the tags during a portion of the import. Go to the computer where the original project was created. Go to the Tags area and then Purge the tags. This will delete all of the tags listed in the tag database. Then re-export the project to the desired area (usually a floppy disk). After exporting the project, re-import the project to the destination computer. The tags that are used in the panels will be automatically placed in the tag database.

b. Another alternative would be to export each individual panel from the original project. Create a new project (Setup should be same as original project) then import each panel into the new project. To export panels, go to the Panels area then open the panel to be exported. Select File then Export from the top menu. The export will ask you for a panel name (8 characters or less) and give it a *.pnl extension. To import panels, go to the Panel areas and select File then Import. Select the directory where your panel files are stored. Then select the panel you wish to import and click OK. This procedure will ask you to save the panel when exiting.

5. After importing a project that has an alarm file, some or all alarms no longer appear in the alarm window when triggered.

The alarm tags did not get created in the tag database. Alarm tags must be created manually in the tag database with the same syntax as the alarm addresses (example: Alarm database tag = "TODD", the address in the tag database must be "TODD" also and not "Todd", "todd", etc.).

6. When importing a bitmap image onto a panel, the error message appears saying *"Bitmaps with more than 16 colors are not supported!"*

a. The bitmap that is being imported was saved as a 24 or more color bitmap. Go back to the bitmap editing software where the bitmap was created or edited (Paintbrush can be used as well). Open the bitmap that is to be imported into QuickPanel. Then select the Save As... feature of your software package. Under the List Files of Types box, select *. bmp 16 colors or *.bmp monochrome. Now the bitmap picture can be imported into QuickDesigner. This is a limitation of QuickDesigner versions 3.32 and below.

7. How do I save my Projects to disk.

In Quick Manager, select the project you wish to save. Then select Projects from the menu bar. From the Projects menu select Export. You will then be prompted with an export dialog box where you would specify the name of the project you want to export it to *.prj (name must be 8 characters or less) and the directory to where you want to store it. NOTE: When you export a project, make sure you give it a name that is not currently being used in the directory where you are exporting it.

8. A *"Raima Data error ## 0err0"* occurs during the development and/or downloading process of a QuickDesigner application.

This indicates that there is some corruption in the Quick Manager's database. The database should be restructured to eliminate the Raima data error.

a. If there are other projects in the Quick Manager list besides the application that caused the error try to export each project one at a time. If the project that is causing the problem allows access to the panels, then open each panel and export them out individually (refer to Import/Export of the section of the Panel Editor manual on how to export panels). Also export any alarm file that may have been created.

NOTE: Do not export panels or alarm file into the default c:\quick# directory else they will be erased during the restructuring process.

b. Close down the QuickDesigner software. Go to Explorer or File manager and under the QuickDesigner software directory, select the subdirectory Data. The file Clean200.bat should be listed in this subdirectory. Double-click the clean200.bat file to restructure the Quick Manager database. NOTE: This will delete all projects and other additional items that were added to the Quick# directory!

c. Once the database has been restructured, you may import the applications and/or project components (panels, alarms, etc.) back into QuickDesigner.

9. When importing alarms, the message *" Alarm import error: Unable to overwrite an existing alarm file in the DB."*

An alarm file already exists in the project database with the same alarm file. Choose File from the top menu, then select Delete. Delete the alarm file in the database that has the same alarm file as the one you are importing. Then select File again, then Import. Choose the alarm file that you want to import. If you wish to keep the existing alarm file, then it must be renamed. Go to File Manger or Explorer and change the name of the *.alm file. Then go back to QuickDesigner and import the new file.

10. How do I delete individual alarms from the alarm database.

QuickDesigner versions 3.32 and below were designed to delete alarms based on the number of alarms from the bottom of the list. This was done primarily to keep alarm addresses grouped to maximize communications. To delete individual alarms, select the alarm to be deleted. Then go to Edit and select Freeform Addressing. This option allows the alarm's address to be edited. Delete the alarm

address and also delete the text message from the alarm line. In QuickDesigner 3.4 and above, you select the alarm and click the delete button.

11. When trying to print copies of the project's screens from the Reports submenu, the only thing that prints is a line of text for the screen and the rest of the page is blank or has ASCII characters.

Usually, this problem is caused by the video resolution setting of your computer's monitor. Lower the video resolution of the monitor to about 640x480 resolution and 256 colors. This usually corrects the print problem.

12. When importing a project, the message " Cannot set alarm record to DB" appears.

The alarm database has an alarm(s) that could not be imported correctly. Export the alarm file of the original project source from the Alarms area. This can be done by selecting File from the top menu bar of the Alarms area. Then select Export. The software will ask for a storage location and a name for the alarm file. Give the file a name and then click OK. Once the file has been exported, delete the alarm file from the original project.

Note: Before deleting the alarms from the original project, make sure the alarm file can be re-imported into a project. The new project can now be exported.

13. How do I place pictures of the QuickPanel screens into other software packages (MS Word, PowerPoint, WordPerfect, etc.).

To copy a picture of a QuickPanel screen into other software packages, open the screen you wish to copy. Then on your keyboard, press Alt+Print Scrn buttons to copy a picture of your computer's screen to the Windows Clipboard. The picture can now be pasted into a graphics editor program (PaintBrush, Paint, Paint Shop Pro, etc.) to be edited.

14. After upgrading to QuickDesigner 3.50, the text in some of the graphical tools has vanished, both in the editor and at panel runtime.

One of the major upgrades to QuickDesigner 3.50 was a complete re-work of both the editor and panel runtime appearance of our graphical tools. In the past, these tools have not always appeared the same in the editor as they do on the panel. This made it difficult for our users to correctly design their QuickPanel projects without having to constantly test them by downloading them to the panels.

In QuickDesigner 3.50, we tried to address the issue of text output, specifically the issues where the text could appear in the editor, but did not appear when downloaded to the panel. An example of this is shown below.

Legend Plate in Editor

Legend Plate at Runtime

This issue was most commonly found by users that attempted to shorten (reduce in height) things like legend plates, local message displays, etc) so that they could fit as many of them on the panel as possible.

In order to address this issue, we adopted a standard for wrapped text output, and made all of the "problematic" graphical tools adhere to it. Those tools which are not generally shortened were not included in the fix. A summary of the text cutoff status of our graphical tools is shown below:

Text Cutoff Fixed	Text Cutoff Fixed	Retained 3.40 Functionality
Alarm	Numeric Data Entry	Bargraph
Ascii Data Entry	Pilot Light	180 Meter Graph
Hardwired Jog Button	Print Screen Button	360 Meter Graph
Goto Panel Button	Pushbutton	Selector Switch
Illuminated Push Button	Time/Date Display	Trend Graph
Legend Plate	Triggered Message Display	Video Tool
Local Message Display	Text Data Display	
Numeric Data Display	Word Button	

The fix covered two main items:

- Ensuring that the graphical tools that contain legends and lenses all output their wrapped text in a standard way.
- Ensuring that if the text will be clipped on the panel at runtime, it is shown as clipped in the editor.

As a result of this fix, some text may appear to have vanished in the editor, compared with earlier versions of QuickDesigner.

Because the output of the text has been standardized, there are a number of benefits to the user. These are:

- Graphical tools can (in general) be shortened more than in earlier versions before the text starts to clip.
- Greater WYSIWYG (What You See Is What You Get) compatibility between editor and panel runtime.

Users can see in the editor whether or not their graphical tool has been made too small to contain the text that is inside it.

As a result of our standardization process, there are certain instances where the text may clip in QuickDesigner 3.50 where it did not clip in earlier versions. These are:

- Graphical objects that have been made too narrow to contain their text (previous versions of QuickDesigner did not clip for width, but output the text even if it overwrote the graphical tool outlines, etc.
- Graphical objects using the 11x16 text font that have been severely shortened. Previous versions of QuickDesigner would output this text even if it overwrote graphical tool outlines, etc.

If you encounter either of these issues, it will be necessary to re-size the graphical tool to ensure that it is large enough to contain the text within it.

Screen Display Issues:

1. After downloading, the QuickPanel does not display a screen.

a. Make sure an initial screen has been selected in Setup. Because the screen name is case sensitive, select an initial screen from the drop-down list.

b. If initial screen is not selected, make sure the project contains a panel with a panel ID of 1. If there is no panel ID 1, the screen will appear blank.

c. If the application was designed to communicate with a networking protocol (DH+, Modbus Plus, GE Genius, RIO, etc.), make sure the appropriate communication module is installed on the QuickPanel.

d. If using the PLC to control screen changes (i.e. Panel Trigger tag), make sure that the Panel Trigger tag address contains a panel ID number that exist in the project.

Make sure the backlight of the QuickPanel is not blown (this would not include the QPI-2xxxx-E2P). Press a few areas on the screen to see if the touch buzzer (if enabled) functions when pressed.

2. After downloading a project, the screen buttons are not completely drawn and/or the pilot lights do not show up or they appear as white squares.

a. The QuickPanel is not communicating with the PLC. Make sure the QuickPanel is connected to the PLC

b. Make sure you are using the correct communications cable for the PLC protocol that your project specifies.

c. Check the **Port** settings under the **Setup** menu and make sure they agree with the PLC's port settings.

3. How do you change the screen contrast?

The contrast of the target display can be changed to suit different viewing conditions. The contrast can be adjusted offline or online.

To adjust the contrast online, the system variable ~System_Contrast must be set to a value from 1 to 7. This can easily be done by using two Word Buttons: one to increment and one to decrement the value of ~System_Contrast. You can see the contrast change as the value is increased or decreased.

Select the Word Button operator and place it on the panel. When the Word Button Settings dialog box appears, enter the tag name as **~System_Contrast**. You must type the tag name exactly as shown, including the tilde (~) at the beginning. Select the Action as Add and set the value to 1. Remember to enter the desired text in the legend plate to identify the operator. Place a second Word Button on the panel with the same tag name and select the Action as Subtract and the value as 1.

You can adjust the screen contrast offline by simultaneously touching the top left and top right corners of the QuickPanel touch screen. This will bring up a contrast bar on the bottom of the screen. The contrast bar is divided into different shaded sections. Pressing a lighter section will lighten the screen, pressing a darker section will darken the screen. If you press the black section, the screen will go black. To accept the screen contrast change, touch the screen anywhere outside the shaded sections.

Be careful when using this adjustment. A blank screen could indicate a serious malfunction of the display or an accidental contrast change to black.

Communications

1. After downloading a project to the QuickPanel, the message *"PLC not Responding 02:FE"* appears at the bottom of the QuickPanel. The communications cable is also connected to the PLC.

a. Check the communications cable part number to the part number specified for the PLC protocol that is in the Communications manual. The communications cable that is being used may not be the correct part number

b. The communications cable that is being used was not built correctly. Check the cable pin-outs with the corresponding cable diagram in the Hardware manual or the Communications manual under the corresponding PLC protocol section.

c. Check the communications settings for the QuickPanel in the Port section under the **Setup** menu. Sometimes the baud rate, parity, or data bits are set different on the PLC port versus the SIO/CN1 port on the QuickPanel. The QuickPanel's communication port settings can be found under the **Setup** menu then under **Port.**

2. When changing from one screen to another, a PLC communications error message appears *"PLC Comm Error (02:xx)"*

This typically happens when a tag on the QuickPanel screen contains a PLC address that does not exist in the PLC. Create ladder logic in the PLC that contains the addresses used in the QuickPanel application. For some PLCs, the addresses can be added directly to the memory area of the PLC.

3. The QuickPanel screen has a message at the bottom of the screen that reads *"PLC Not Connected (02:FF)*, but the communications cable is connected to the QuickPanel and the PLC.

a. Make sure the correct communications cable is being used. This can be checked by looking up the cable part number in the Communications manual under the specific PLC protocol.

b. Make sure the cable wire connections are correct. Wiring diagrams can be found in the Communications manual under the specific PLC protocol or in the Hardware manual.

c. Check the Destination id in the QuickDesigner's Setup menu under the Protocol button. The destination id is the PLC's address, the source id is the QuickPanel's address. If the destination id does not match the PLC's address, then QuickPanel will assume it is not connected. Check the Communications manual for specific setup instructions for your PLC.

4. The message *"PLC comm. error 02:xx"* appears on the QuickPanel screen.

a. Sometimes this means that the Panel Trigger Tag address under the Setup--System menu is an internal or invalid tag. Select the project then go to Setup. Then select the System button. Delete the Panel Trigger Tag address then say OK to accept the changes. Click OK to exit Setup. Next go to the Tags menu. Delete the Panel Trigger tag address from the tag list. Close the tag database. Go back to Setup then System and retype the Panel Trigger Tag address. Click OK. Re-download the project.

b. The QuickPanel unit is not physically connected to the PLC it has been set up for. The communications cable is missing or the wrong cable is attached.

c. If you are using QuickPanel to communicate with more than one PLC on a network protocol (tag_PLCNODE) and one or more PLCs are not on the network. Check the your PLC address(es) and make sure that QuickDesigner application is setup appropriately.

d. The QuickPanel is connected to the PLC, however one or more communication parameters are not set correctly (baud rate, parity, data bits, etc.). Make sure the PLC communications port is set up the same as the QuickPanel's communication port. QuickPanel parameter can be checked by going to Setup and Port and/or Protocol in the QuickDesigner software.

e. This means that there are one or more Tag addresses on the currently displayed screen that does not have a reference in the PLC. For example, your PLC ladder program only has variables up to 15, but the push-button on the QuickPanel screen is trying to send/receive information at address 25. The PLC program has to be changed to accommodate addresses up to 25.

5. After downloading an application, some or none of the screen objects (pushbuttons, pilot lights, numeric entry, etc.) appear to be communicating with the PLC.

The tags for these non-communicating objects appear to be internal (does not look for a PLC connection). To resolve this issue, the tag variables for the project must be validated. To validate the tag addresses, go to the Tags database. Select the menu item Tools which is located at the top of the screen along the menu bar. Under Tools, select Validate Tags. Any tags that are not valid tag addresses for the protocol selected in Setup will be listed in the Internal Tags box.

6. What are the GE Genius protocol error messages*?*

a. 02:C8---Datagram was requested, user disabled datagrams
b. 02:C9---PLC is not on the Genius bus
c. 02:CA---Cannot recognize the type code at this node.
d. 02:CB---Read datagram failed, no specified reason
e. 02:CC---Write datagram failed, cause was not determined
f. 02:CD---Micro-Geni card failed to power up correctly
g. 02:CE---Cannot find the S1 file
h. 02:CF---A uGeni command timed out during configuration
f. 02:D0---A uGeni command configuration returned a syntax error
g. 02:D1---A uGeni command configuration returned an unknown response
h. 02:D2---An incoming reference address does not match the QuickPanel Configuration
i. 02:D3---A BCD table length does not match our configuration
j. Memory type is not valid for this CPU

7. After importing a Remote I/O application, the block transfers no longer works even after revalidating the tags.

The block transfer files are usually created as internal. Revalidating the tags will not correct this problem. Under the project's Setup menu then the Protocol submenu, delete the block transfers by disabling (deselecting) each block transfer file. Say OK to the change and close the Protocol area. Go back into the Protocol area and recreate the block transfer files again. Once all the files are created, click OK and exit Setup. These new block transfer files should now function as they once did.

8. A QuickPanel gets a PLC Comm Error 02:xx or only partial communications occurs on some panels when using Modbus protocol.

a. The Modbus protocol groups address request into groups of 8 in order to maximize communications between the QuickPanel and the PLC. A PLC communications error will occur when the number of groups on a panel exceed 8 (i.e. OR100-110= group 1, OD113-115 = group 2, ID1-10= group 3, OD1 = group 4, etc.). To resolve this issue, an .ini file can be created to set the grouping number to 0 so that all tags on a panel will be read as 1 group.

NOTE: This ini setting may cause QuickPanel communications to slow down.

b. Create an ini file called PCO.INI under the C:\Quick# directory (this can be done in Notepad). In that file create the group [Modicon Modbus]. Under this group, type the line GroupGapSize=0. This will enable the QuickPanel to read and write values to the PLC without grouping.

Screen Changing Issues

1. The GoTo buttons do not change screens when pressing the GoTo button(s) on the touchscreen.

Check to make sure the GoTo button contains the name of an existing panel. Because panel names are case sensitive, select a panel name from the drop-down list in the GoTo object.

2. After downloading an application, the GoTo buttons do not change screens and the message *"PLC Comm Error 02:xx"* appears at the bottom of the screen.

a. This is usually caused by an invalid **Panel Trigger Tag** address. Make sure the panel trigger tag address under **System** in the **Setup** menu has been programmed in the PLC.

b. The panel trigger tag address may be regarded as an "Internal Tag" by QuickDesigner and is therefore not communicating with the PLC. Delete the Panel trigger tag address from the **System** menu (found under **Setup**). Then go to **Tag** and delete the address from the database. Go back to **Setup** and under **System**, type in the panel trigger tag address (can use the previous tag if desired). Re-download the application after changes are made.

3. When selecting a Numeric Entry object to input data, the data entry screen appears for 1 second but before data could be entered, the QuickPanel switched back to the original panel.

The PLC ladder logic is forcing the QuickPanel to display a screen using the panel trigger tag. When an internal screen number (usually in the 4,000 range) is sent to the panel trigger tag, it is immediately overwritten by the PLC ladder logic.

a. Use a One-Shot instruction in the rung of ladder logic that changes the panel id number for the panel trigger tag.

b. In the qmgr.ini file, under the section [Options], create a new line at the end of the section that reads:

ScreenChangeWriteTrap=0

QuickDesigner must first be closed down before this change is made. After the line has been entered and saved, open QuickDesigner and re-download the application.

NOTE: **This change will disable all internal QuickPanel screen changes (numeric entry screen, alarm screen, and GoTo buttons) from being sent to the Panel trigger tag address.**

Compiling

1. When downloading an application, the compiler stops, then gives the error message:
***GPC:LockG STOP Null GMB!* OK.**

a. This is usually caused by some object on a panel that requires some text characters but does not have any (usually Text object). Check the panel name and the object type where the compiler stopped. This usually indicates the where and what of the problem. Once the panel name and the object have been identified, click OK. Then cancel the compiler. Go to the panel and delete the object or double click on the object and type in some text characters.

b. Sometimes the actual text object that is causing the problem is difficult to find because the panel is completely covered with operator devices. If this is the case, then individually select each object (hold

down the shift key as you select each object) and then group them (Edit Menu). Once the objects have been grouped, Cut (Edit menu or Scissors icon) the entire grouped object. Go to the Edit menu and choose Select All. This should identify any Text objects that may have been hidden. Delete the empty Text box. Then Paste (Edit menu or Glue jar icon) the grouped object and place it back on the screen.

2. When compiling a project, the message *(!) No state is specified in the 'xxxx' tool and the compiler would not build it. OK" appears.*

This is a message that explains that the object described in the message will not be sent to the QuickPanel after downloading because there were no states specified for the object.

3. During the compile portion of a download of a project, a message appears during the initial compile setup:

" Fatal error creating download file. S1 file exhausted. Project tags/targets more than the 64 device and/or address combination allowed. Limit the number of devices or narrow address/file ranges used."

Usually happens for an Allen-Bradley network protocol (or other network protocols). This means the number of files addressed (i.e. N7:... where 7 is the file number), the number of devices addressed in the application (i.e. N7:0_3, where 3 is the device address number or node number), or a combination of the two exceed a total of 64. The number of files or devices must be reduced so that it does not exceed 64 total.

4. During the compile part of the download, an error appears which says that the compiler could not find the shape files to build "?????" object. Followed by another message that says cannot locate files .taf, .dbl., and .log.

a. This message is usually caused by a conflict with the Lantastic network software. If you are using this network software (especially in Win 95), it must be disabled before proceeding with the download.

b. The PDO files for the object(s) that is being compiled is missing or the compiler is looking for the PDO files in an incorrect directory. Re-install the software to recover the files.

5. During the compile stage of a download, the compiler stops and gives the message: *"Maximum tag count exceeded for this panel"*

This means that there are too many object resources being used on the panel. Go to the panel where the compiler stopped. Click the " medical bag" icon and check the resource count. The resource count for each panel type is described in the Resource Manager section of this manual.

Downloading

1. When downloading an application to a QuickPanel, Quick Courier prints the message *"Your project has not been compiled for this display device. Go to the project Setup, press the System button to change the Compilation setting."*

If using QuickDesigner Advanced software, the compilation section does not exist under the Setup menu's System button. It automatically assumes you are downloading to a Qpx-2 QuickPanel. If the model number of the QuickPanel begins with QPx-1 then you must either use the QuickDesigner Standard software package or use a QuickPanel model number QPx-2.

2. During the download, the Quick Courier message box says, *"Determining display device..."*. Then after some time the software asks you to *"Turn the Unit Off.."* Then after turning unit back on, the compiler goes on to ask you to *"Turn the unit off"* again, then on again, then off again, etc.

a. Check the cable that is being used for downloading. The cable should be **HMI-CAB-C49**.

b. Check the Com port that is being used. Make sure that it is not being used by some other software package. Also check the comm. port's IRQ (interrupt) settings. Some other installed device may be using that comm. port's setting (Com 1 IRQ = 4 and Com 2 IRQ = 3). This can be done under the Windows **Control Panel** then select **Ports**.

c. The HMI-CAB-C49 download cable may be damaged. Try another download cable to see if the download will continue.

d. Make sure that the incoming power to the QuickPanel unit is sufficient. This is usually an issue with the 24 VDC unit.

e. Exit out of the download then exit out of QuickDesigner software. Go to Windows **Notepad** then open the file **Courier.ini** that is found in the directory where QuickDesigner was loaded (usually c:\quick?). Change the **Autobaud** from the 38400 default to 9600.

3. When downloading, the Courier gives the message *"Error changing baud rate..."*

a. Select the Update Device Executable box. Then de-select it to restart the download. The software may not have been able to change the baud rate correctly during the initial download.

b. Exit out of the download then exit out of QuickDesigner software. Go to Windows **Notepad** then open the file **Courier.ini** that is found in the directory where QuickDesigner was loaded. Change the **Autobaud** from the 38400 default to 9600.

4. When downloading, Quick Courier comes up with a message that says that *"There are no comm. ports available for download"* and/or there are no comm. port selections available in the drop down list.

a. Close down any software packages that may be using the comm. port for communications. Allen-Bradley's INTERCHANGE software is a usual suspect in this instance. If INTERCHANGE has been loaded on your computer, disable or remove the driver that is using your comm. port (DF1 or DH485). Reboot the computer then try downloading to QuickPanel again. HINT: Make sure you properly close down QuickDesigner software before you reboot the computer.

b. Check the **system.ini** file (found in the C:\Windows directory) and check the **[boot]** section for the appropriate comm. port driver. Standard comm. port driver (comm.drv=comm.drv) should be used for QuickDesigner downloads. If there is a non-standard com port driver (comm.drv=????), place a semi-colon (;) in front of that line and create a new line that reads **comm.drv=comm.drv**. Also check the **[386Enh]** section of the file and make sure that any reference to the com ports contain the correct IRQ settings (i.e. COM1 IRQ=4 and COM2 IRQ=3)

5. The application load portion of the Quick Courier download fluctuates between two percentage values (i.e. 99%....94%....99%), then gives the message *"Application Download Aborted."*

a. This usually means that the application that is being downloaded is too large for the QuickPanel unit. Exit the download then go back to the application and eliminate unnecessary objects in the Panels area. Bitmap graphs are the biggest culprit of excessive memory use.

6. During the initializing process of the QuickDesigner software, a message appears: *"Error initializing memory!"*

a. This is usually a problem when an attempt at downloading to the QuickPanel was abruptly interrupted such as the download cable becoming disconnected or the power to the QuickPanel or computer during the download process was turned off. On the QuickPanel, press three corners of the touch screen (top two corners and one of the bottom corners). **NOTE: If the two top corners are pressed simultaneously, a contrast adjustment bar will appear at the bottom of the screen. Press a top and bottom corner first, then press the last top corner**. A menu bar should appear. Press **Offline**. Then select **Initialize**. Then choose **Initialize Memory**. The QuickPanel will ask you for a password. Type **1101,** then press **Start**. With the QuickPanel Jr. hardware, you must press the password entry box to get a numeric keypad to appear. Type in the password **1101**and press **Set**. Then press **Start**. The memory should be initializing. Once the memory has been erased, try the download again.

b. Changing the **AutoBaud** rate in the **courier.ini** file can also be useful in this situation. The QuickPanel may be missing the initializing signal from the QuickDesigner software because the baud rate is a little high. Go to Notepad (Windows text editor) on your computer and open the **Courier.ini** file. Change the Autobaud rate from its current setting to 9600 (usually the default setting is 38400). Save the changes then go back to QuickDesigner and try the download again. You may notice an increase in download time because of this change.

Run Time Issues

1. When using a Text Display tool with the GE SNP protocol, the characters in the text display object does not display correctly. The characters of each word is switched (i.e. waters becomes awetsr).

The GE SNP protocol reads the low byte of the word address then the high byte that shows up on the QuickPanel as inverted. To correct this problem, press one of the top corners of the screen, one of the bottom corners, then the other top corner at the same time (follow the above sequence). A menu bar should appear at the bottom of the screen. Press **Offline**, then press **System Environment Setup**. Under **System Environment Setup**, choose **Character String Data Setup**. Change the current number (1) to a 2. Press Set. Go to **Main** then press **Run**. The character should now be read correctly. **NOTE: This change is not retentive. Once the unit is reset or another download has occurred, this procedure must be done again to read the character values correctly.**

2. After importing a project from one QuickDesigner software package to another, some or all of the objects (tag addresses) on the panel do not appear to communicate with the PLC. There are no messages on the QuickPanel that indicate a communications error.

a. Go to the **Tags** area of the project, then select **Tools** from the top menu and select **Validate.** This will determine if there are any internal tags used in the program. If the tags were marked as internal, then this validation process should correct those tags that are valid so that they communicate with the PLC.

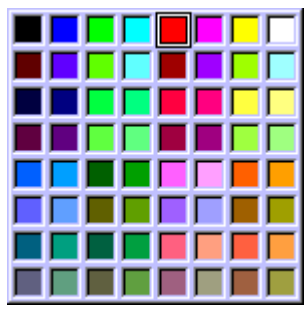
b. If re-validating did not work, purge the tag database of all tags. Then go to each panel, open it, and go to **File--Save As** and save the panel with the original panel id and name. This will regenerate the tags in the tag database as new.

Appendix D: 64 Colors

Color Selection

Originally the QuickPanel supported only eight colors (BLACK, RED, GREEN, YELLOW, BLUE, MAGENTA, CYAN, WHITE).

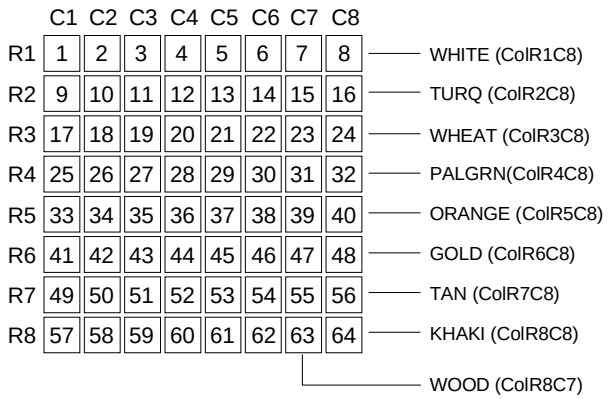
With the addition of the Series 3 QuickPanel, Quick Designer will now support 64 colors. That means when you are using a Series 3 QuickPanel, and you click on one of the color options, a 64-color palette will appear. The palette appears whenever a color selection combo box is clicked inside the QuickDesigner software.



If you load a color project from an 8 color unit into a monochrome unit, Red, Green and Blue will be converted to Black, and Yellow, Magenta, and Cyan will be converted to white.

Color Index Numbers

The Local Message Display and the Triggered Message Display allow importing and exporting text files that contain color descriptions. Colors can be specified by their color name or by their index number. The index numbers are laid out on a grid that corresponds to the color palette. The index number grid is shown below. The index numbers can be cross-referenced to the 64-color grid so you can match Color Index numbers to a Color name.



64-Color Grid

The Color Grid shows the Color Index number and the Color Name. The help files contain sample colors, however, you must have a display capable of showing 64 colors.

The colors in the grid can be referenced in two ways when preparing an import file for a Local Message Display (*.lmd) or a Triggered Message Display (*.tmd).

Use the names shown in the 64-Color Grid.

Use the Row and Column numbers shown in the Color Index Numbers table (ie. BLACK = ColR1C1; KHAKI = ColR8C8)

Color Index	Color Import Name	Color Index	Color Import Name	Color Index	Color Import Name
1	BLACK	23	YEL2	45	PRPL2
2	BLUE	24	WHEAT	46	STLBLU
3	GREEN	25	PLUM	47	DKORNG
4	CYAN	26	DKPURP	48	GOLD
5	RED	27	GRN3	49	BLU5
6	MAGENTA	28	MNTGRN	50	SEAGRN
7	YELLOW	29	DKPINK	51	DKCYAN
8	WHITE	30	MDMAG	52	GRN4
9	DKRED	31	LOLGRN	53	PINK2
10	BLU2	32	PALGRN	54	PLPINK
11	LWNGRN	33	BLU3	55	CORAL
12	CYAN2	34	SKYBLU	56	TAN
13	INDRED	35	FSTGRN	57	SLTBLU
14	PURPLE	36	MDGRN	58	CDTBLU
15	YLWGRN	37	ORCHID	59	DKGRAY
16	TURQ	38	PALMAG	60	GRN5
17	NVYBLU	39	TANGER	61	DKPLMG
18	RYLBLU	40	ORANGE	62	GREY
19	GRN2	41	RCHBLU	63	WOOD
20	SPRGRN	42	BLU4	64	KHAKI
21	RED2	43	DKGOLD		
22	FUSCH	44	OLVGRN		

RGB Color Map

Here is the list of colors that are available on the 64-color display referenced to their RGB values. The center column shows how colors from a 64 color palette are mapped to an 8 color palette.

	0-255 Values			8 Color	Percent Values		
	Red	Green	Blue		Red	Green	Blue
1	0	0	0	Black	0	0	0
2	0	0	255	Blue	0	0	100
3	0	255	0	Green	0	100	0
4	0	255	255	Cyan	0	100	100
5	255	0	0	Red	100	0	0
6	255	0	255	Magenta	100	0	100
7	255	255	0	Yellow	100	100	0
8	255	255	255	White	100	100	100
9	112	0	0	Black	44	0	0
10	112	0	255	Blue	44	0	100
11	112	255	0	Green	44	100	0
12	112	255	255	Cyan	44	100	100
13	176	0	0	Red	69	0	0
14	176	0	255	Magenta	69	0	100
15	176	255	0	Yellow	69	100	0
16	176	255	255	White	69	100	100
17	0	0	112	Black	0	0	44
18	0	0	176	Blue	0	0	69
19	0	255	112	Green	0	100	44
20	0	255	176	Cyan	0	100	69
21	255	0	112	Red	100	0	44
22	255	0	176	Magenta	100	0	69
23	255	255	112	Yellow	100	100	44
24	255	255	176	White	100	100	69
25	112	0	112	Black	44	0	44
26	112	0	176	Blue	44	0	69
27	112	255	112	Green	44	100	44
28	112	255	176	Cyan	44	100	69
29	176	0	112	Red	69	0	44
30	176	0	176	Magenta	69	0	69
31	176	255	112	Yellow	69	100	44
32	176	255	176	White	69	100	69
33	0	112	255	Blue	0	44	100
34	0	176	255	Cyan	0	69	100
35	0	112	0	Black	0	44	0
36	0	176	0	Green	0	69	0
37	255	112	255	Magenta	100	44	100
38	255	176	255	White	100	69	100
39	255	112	0	Red	100	44	0
40	255	176	0	Yellow	100	69	0
41	112	112	255	Blue	44	44	100
42	112	176	255	Cyan	44	69	100
43	112	112	0	Black	44	44	0
44	112	176	0	Green	44	69	0
45	176	112	255	Magenta	69	44	100
46	176	176	255	White	69	69	100
47	176	112	0	Red	69	44	0
48	176	176	0	Yellow	69	69	0
49	0	112	176	Blue	0	44	69
50	0	176	176	Cyan	0	69	69
51	0	112	112	Black	0	44	44
52	0	176	112	Green	0	69	44
53	255	112	176	Magenta	100	44	69
54	255	176	176	White	100	69	69
55	255	112	112	Red	100	44	44
56	255	176	112	Yellow	100	69	44
57	112	112	176	Blue	44	44	69
58	112	176	176	Cyan	44	69	69
59	112	112	112	Black	44	44	44
60	112	176	112	Green	44	69	44
61	176	112	176	Magenta	69	44	69
62	176	176	176	White	69	69	69
63	176	112	112	Red	69	44	44
64	176	176	112	Yellow	69	69	44